DOCUMENT RESUME

ED 069 867 VT 017 457

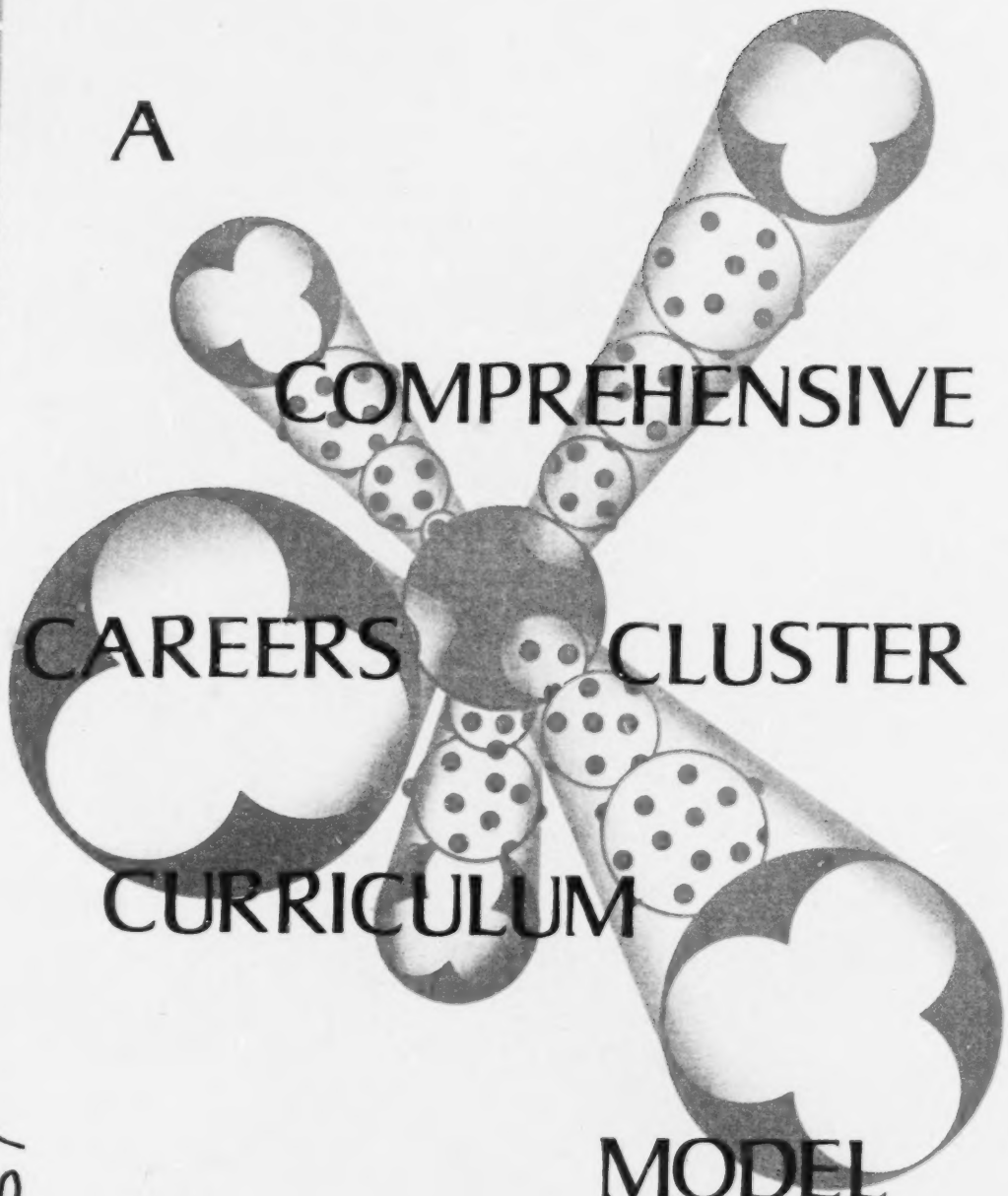
AUTHOR	Bortz, Richard F.
TITLE	A Comprehensive Careers Cluster Curriculum Model. Health Occupations Cluster Curriculum Project and Health-Care Aide Curriculum Project.
INSTITUTION	Southern Illinois Univ., Carbondale. Div. of Vocational and Technical Education.
PUB DATE	Jun 72
NOTE	86p.
AVAILABLE FROM	School of Engineering and Technology, Health Occupations Project, Southern Illinois University, Carbondale, Illinois 62901
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Articulation (Program); Career Education; Community Involvement; *Curriculum Design; Developmental Programs; Developmental Tasks; Factor Analysis; Goal Orientation; *Health Occupations Education; Health Personnel; Literature Reviews; *Models; *Occupational Clusters; Program Development; Resource Materials; Secondary Grades; Vocational Development
IDENTIFIERS	Career Awareness; Career Exploration

ABSTRACT

To prepare learning materials for health careers programs at the secondary level, the developmental phase of two curriculum projects--the Health Occupations Cluster Curriculum Project and Health-Care Aide Curriculum Project--utilized a model which incorporated a key factor analysis technique. Entitled "A Comprehensive Careers Cluster Curriculum Model," five career cluster axes, five developmental career component models, and two auxiliary modules were proposed. The career cluster axes included: (1) applied biological and agricultural careers, (2) business, marketing, and management careers, (3) health careers, (4) industrial-oriented careers, and (5) personal and public service careers. The developmental modules included: (1) elementary school-based, (2) secondary school-based, (3) secondary school and community-based, (4) community-based, and (5) occupational entry. This fifth module contains three options: (1) extended self-actualization, (2) long-range occupational employment, and (3) immediate occupational employment. Career guidance and related academic subject matter modes constitute two additional modules. After a literature review, the project staff wrote parameters and listed developmental tasks. Course content will be developed for each module of the total curriculum model. (AG)

ED 069867

A COMPREHENSIVE CAREERS CLUSTER CURRICULUM MODEL



VT017457

"Adolesence is seen as a period in which young people explore the world in which they live, the subculture of which they are to become a part, the roles they may be expected to play and their opportunities to play roles which suit their personalities, interests, and aptitudes."

Jean Pierre Jordaan

In cooperation with the Professional and Curriculum Development Unit, Division of Vocational and Technical Education and the Department of Occupational Educatio Southern Illinois University, Carbondale, Illinois 62901.

ED 069867

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRO
DUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIG
INATING IT. POINTS OF VIEW OR OPIN
IONS STATED DO NOT NECESSARILY
REPRESENT OFFICIAL OFFICE OF EDU
CATION POSITION OR POLICY

A COMPREHENSIVE CAREERS CLUSTER CURRICULUM MODEL

by

Dr. Richard F. Bortz
Principal Investigator

Health Occupations Cluster Curriculum Project

and

Health-Care Aide Curriculum Project

June 1972

© Copyright 1972 by Richard F. Bortz
All rights reserved. This book, or any part thereof, may not be reproduced in any form without written permission of the author.

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
Richard F. Bortz

TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER

ACKNOWLEDGEMENTS

This author is grateful to Messrs. Ed Roulhac, Medard Gabel and Jerry Sturmer of the Health Occupations Cluster Curriculum Project, Ms. Donna Talkington and Ms. Margaret Cazenave of the Health-Care Aide Curriculum Project, together with Ms. Pam Laws and Mr. Henry Guenther, who are equally involved on both projects, for their contributions, humor and tolerance.

Special thanks are due Dr. Jim Marshall, Assistant to the Project Director, Health Occupations Cluster Curriculum Project, for his literary contributions and assistance, and Ms. Susan Harvey for her most lethal comments.

Not to be forgotten are Ms. Helene Orloff and Ms. Haigohe Pashayan for their quick wit, glibness of tongue, and nimbleness of finger.

RFB

FOREWORD

The purpose of career education is to assist youth and adults alike in attaining their basic and contrived needs. The offerings of the educational system must parallel the developmental stages as they occur in the life of the individual and assist him in satisfying his career-related needs from the early formation of his personal self-concept through the evolutionary periods of career awareness, exploration, evaluation, and implementation.

Proponents of career education support such theories of curriculum design. As perceived by them, career education is the term used to denote . . .

> . . .the total effort by educational agencies and communities in presenting organized career-oriented activities and experiences to all persons from nursery school through adulthood, and orients the entire educational plan into one, unified, career-based system.

In structure, career-related learning activities serve as the central theme of the school's total educational program. Related academic subject matter courses, together with a career and occupational guidance program, lend support to the career offerings of the school and serve as a viable career-related information resource to the students.

The proposed career education model was developed and offered to the Illinois Division of Vocational and Technical Education as

a viable plan to implement career education in the state. The model was designed around five career clusters: Applied Biological and Agricultural Occupations, Business, Marketing, and Management Occupations, Health Occupations, Industrial Oriented Occupations, and Personal and Public Service Occupations. The plan is sound and logical. It provides the students with a continuous series of career-centered learning experiences which are initially founded in the school, but gradually move into the community. It avoids, as much as possible, a Realist's approach to education,and emphasizes the types of experiences applauded by one holding a Pragmatic or Existentalistic point of view.

Dr. Richard F. Bortz

Table of Contents

		Page
I.	Title Page	i
II.	Acknowledgements	ii
III.	Foreword	iii-iv
IV.	Table of Contents	v-vii
V.	Introduction	1
	A. Opening Statements	1
	B. Statement of Purpose	4
VI.	Program Identification	5-20
	A. Conducting the Key Factor Analysis	5-6
	B. Identifying Objectives	6-7
	C. Grouping Social Needs	7-8
	D. Stating Key Factors	8-9
	E. Identifying Key Indicators	9-11
	1. Educational Performance Standards	10
	2. Youth Employment Rates	10
	3. School-Employment Transition Duration	10
	4. Full-Time Employment Rates	10
	5. Seven-Year Income Trends	10
	6. Five-Year Trends for Additional Career Education	11
	F. Establishing Program Goals	11-12
	G. Identifying Career Axes and Component Program Modules	12-13
	H. Defining the Components of the Career Model	13-14

Page

I. List of Parameters 14-18

1. Developmental Career Component Modules 14-17

a. Elementary School-Based Career Component Module. 14

b. Secondary School-Based Career Component Module. 14-15

c. Secondary School and Community-Based Career Component Module. 15-16

d. Community-Based Career Component Module. . . . 16

e. Occupational Entry-Level Employment Module. 17-18

2. Auxiliary Career Component Modules 17-18

a. Career Guidance Component Module 17-18

b. Related Academic Subject Matter Nodes. 18

J. List of Development Tasks. 18

1. Development Career Component Modules 19-20

a. Elementary School-Based Career Component Module. 19

b. Secondary School-Based Career Component Module. 19

c. Secondary School and Community-Based Carrer Component Module. 19

d. Community-Based Career Component Module. . . . 19-20

e. Occupational Entry-Level Employment Module . . 20

VII. Review of the Literature 21-29

A. Early Influences 21-22

B. Lifestage Theory Development 23

C. Self-Concept 24-26

D. Occupational Decision-Making and Choice. 26-27

Page

E. Other Materials 28-29

VIII. Assumptions, Pitfalls and Parameters. 30-32

A. Assumptions 30

B. Pitfalls. 31

C. Parameters. 31-32

IX. The Comprehensive Careers Cluster Curriculum Model. 32-53

A. Aspects of the Total Model. 32-40

1. Grade Level 37-39

2. Behavioral Emphasis 39-40

B. Developmental Career Component Modules. 40-52

1. Elementary School-Based Career Component Module . . 43-44

2. Secondary School-Based Career Component Module. . . 45

3. Secondary School and Community Based Career Component Module. 45-46

4. Community-Based Career Component Module 46-47

5. Occupational Entry-Level Career Component Module. . 47-52

a. Extended Self-Actualization Option. 48-50

b. Long-Range Occupational Employment Option . . . 50-52

c. Immediate Occupational Employment Option. . . . 52

C. Auxiliary Career Component Modules. 52-54

1. Career Guidance Component Module. 53

2. Related Academic Subject Matter Nodes 53-54

X. Summary 55-57

XI. Appendix. 58-67

A. Appendix A--Key Factor Analysis Logic Diagram 58

B. Appendix B--Random List of Social Needs 59-62

C. Appendix C--List of Grouped and Ordered Social Needs. . 63-67

XII. Bibliography. 68-74

A COMPREHENSIVE CAREERS

CLUSTER CURRICULUM MODEL

Introduction

When one reviews the literature of the history and evolution of Western philosophic thought as it pertains to educational matters, it becomes readily apparent that the early philosophers viewed the world with its many trappings as something from which they were apart: an on-going process "out there" to be studied, mused over and intellectually dissected. However, as time passed, philosophers gradually turned from "things of the mind" and begin to re-evaluate, focus on, and interact with the world about them. Eventually, many sought answers to their questions concerning reality, truth, and goodness from the world itself. Their very existence came to rest in the worlds of experience and choice.

A pattern similar to that found in Western philosophic thought also manifests itself in the study of Western educational practice. The history of formal education has, traditionally, sought to "liberate the spirit" and to "unlock the minds" of only a select and privileged few. Tracing the history of educational practice in the Western world from antiquity to the present day, in many instances, only reaffirms the fact that many educators and students alike are to be considered heirs of their Graeco-Latin counterparts. However, at the same time an ever-growing movement away from traditional thought and practice is evidenced. The subject matter based disciplines of Classic origin

receive proportionately less emphasis as curricular practices change to favor the experiences, choices and needs of the learner. In essence, the emphasis is shifting from concerns for subject matter to concerns for people.

In continuing fashion, contemporary writers, philosophers and theoreticians from the fields of education, guidance, psychology, government and religion, as well as philosophy, have rallied to extend and support this more recent approach to education. As the numbers of students representing a myriad of social, cultural, economic, ethnic, religious and political backgrounds increase, it becomes more and more apparent that the traditional classic curriculum holds little, if any, import for the majority of them. No longer is education a privilege for the select few. It is rapidly becoming a right and, in many cases, a necessity, for many if not all people. If the slogan "education for all" serves as the educational hallmark of the times, then those responsible for developing educational curricula have but one alternative: to develop curricula which assists people in meeting their needs. Subject matter then becomes a means to an end rather than an end in and for itself.

One very real attempt by elected government officials to assist society as a whole in assuring the safety and well being of its members is manifested in the Vocational Education Act of 1963 and the 1968 amendments of the Act: the Act. . .

> . . .set a new pattern for Federal support of public vocational education and made training for 'gainful employment' a goal for all programs it supported. The intent was to modernize and redirect the entire vocational system, put resources in reach of <u>all</u> in all

> communities and offer training for job entry or career advancement in virtually every occupation below the professional or four year degree level. . . .Most significantly, focus shifted from traditional occupational categories to the diverse training needs of youth and adults in certain population groups. Special reference was made to the high school students, persons who have completed or left school, persons in the labor market who needed training or retraining to achieve job stability or advancement and to the handicapped or disadvantaged.

More recently, Congress recognized that the full impact of the Vocational Education Act of 1963, together with the 1968 Amendments to the Act, could not be

> . . .realized until there [was] widespread understanding of and support for occupational preparation in the general academic community, which [could] in turn [be] reflected in changed attitudes, curriculums, and practices in elementary and secondary schools.

To implement the types of occupational and career-oriented programs implied in the Occupational Education Act of 1971* . . .

> . . .the development of a long range strategy [was needed] for infusing occupational education (including general orientation, counseling and guidance and placement either in a job or in post-secondary occupational programs) into elementary and secondary schools on an equal footing with traditional academic education, to the end that every child who leaves secondary school is prepared to either enter productive employment or to undertake additional education at the post-secondary level, but without being forced prematurely to make an irrevocable commitment to a particular educational or occupational choice. (Italics mine.)

Sidney P. Marland, in a speech made to the National Association of Secondary School Principals in Houston, Texas, on January 23, 1971, reflected a similar point of view regarding the need for career-centered

---

*The Occupational Education Act of 1971, one of several sections in The Higher Education Act of 1971, has received the approval of the members of both the Senate and the House and is in Committee at the time of this writing.

education:

> To make public education become relevant according to today's needs and the needs of the future, the entire school program must be restructured; and it is becoming increasingly evident that public education should be focused around the theme of career development. . .which begins in grade 1 or earlier and continues through the adult years. . . .Thus, comprehensive career education includes a sequentially-developed educational program offering career orientation, exploration and job preparation for all students.

In like fashion, members of the Division of Vocational and Technical Education of Illinois recognized the inherent value of career education and set about to identify people in the state who shared their concern and who would accept the responsibility of developing programs to assist students in achieving their personal career and occupational goals. Their efforts resulted in the awarding of a number of grants to individuals in various institutions throughout the state. Two health-related curriculum project grants were awarded to the Department of Occupational Education, Southern Illinois University at Carbondale. The grants established the Health Occupations Cluster Curriculum Project and the Health-Care Aide Curriculum Project. Both projects were similar in purpose and scope in that each was funded to prepare learning materials for use in secondary school, health-related, career-oriented programs of study.

Statement of Purpose

Thus, the stage was set. The theme was social need; the actors, individuals with unmet educational and employment needs; the roles, experience, choice and preparation; the time, all of man's educational

and work life and the producers, members of the two curriculum projects. From this setting, the purpose of the study was derived around which the Career Cluster Curriculum Model was developed:

> . . .To maximize the opportunities for each individual to gain an awareness of, explore, evaluate and implement his own interests, capabilities, and values through personal interaction, decision making and growth and development in simulated and real world career-oriented learning experiences . . .

Program Identification

With the above statement serving as a common purpose, and with a felt need to establish a time-space relationship for their contracted activities, the staff members of both the Health Occupations Cluster Curriculum Project and Health-Care Aide Curriculum Project set about to define a comprehensive career model which would add meaning and continuity to their individual and collective efforts. The former group was charged with developing a "Health Careers Orientation Program" for use at the ninth and tenth grade levels. The latter group was contracted to develop curriculum materials to be used at the eleventh and twelfth grade level for preparing people for entry-level occupations in the health industry.

Conducting the Key Factor Analysis

> Key Factor Analysis is a synthesis of General Systems Theory, the behavioral sciences and the business oriented disciplines. Because it provides a complete, logical framework, it serves to integrate the best of what each discipline, and for that matter, each theoretical construct, has to offer. KFA is a complete management philosophy and a complete management strategy. It serves as a unifying and integrating 'bridge' between people, their needs, and their organization. (Jarett et.al., 1970)

The Key Factor Analysis technique served a two-fold purpose in the development of the proposed "Careers Cluster Curriculum Model." The technique was used because of its novel approach to problem solving, i.e., it initially focused on the needs of the total society and methodically advanced toward solutions (programs) derived directly from these needs. The technique assisted the members of the two health curriculum groups in identifying the programs that would eventually comprise the comprehensive career model. A schematic denoting the KFA activities and the order in which they occurred is shown in Appendix "A".

Before continuing, the reader should be cognizant of several facts concerning the Key Factor Analysis technique used in this study: 1) the technique is used by an existing organization to procure information for its members in order that they might propose new programs or modify existing ones to better meet existing social needs (objectives); 2) the statement of purpose is that of the existing organization; 3) the term "objective" is synonymous with "social need"; 4) identifying objectives (social needs), grouping objectives, stating key factors and key indicators are all activities which are grounded in social data, i.e., although the organization conducts the key factor analysis, it looks to society for the necessary data. Once this data is acquired the organization then assumes its original role and 5) establishes goals for future programs and 6) proposes said programs to meet these goals.

Identifying Objectives

The list of objectives (social needs) adopted by the staff members of the two curriculum projects for use in developing the curriculum model

is a compilation of several lists developed by Jarett, Rader and Longhurst. For purposes of this study, objectives are defined as "requirements for existence which persist over time." (Jarett, et.al., 1970) While some effort was given by the staff members of the two projects in evaluating and modifying the pre-formulated list of objectives, the changes that resulted were minor. For the most part, the objectives that appeared on the original lists (Jarett, et.al.) appear also on the list of objectives utilized in this study. Appendix "B" shows the random list of selected objectives.

Grouping Social Needs

After much examination, evaluation and debate by members of the Health Occupations Cluster Curriculum Project and Health-Care Aide Curriculum Project, the individual statements of objectives were assigned to one of three major objective groupings: Personal Interaction Objectives, Decision-Making Objectives, and Growth and Development Objectives. The group headings were taken directly from the statement of purpose of the curriculum project.

An extremely fine degree of discernment was required of each staff member in assigning the individual objectives to one of the three objective groups. For example, the decision had to be made as to whether the social objective "to develop mature social relationships" was best viewed as a "Personal Interaction" objective or as a "Growth and Development" objective. A triangular configuration was developed to assist the staff members in identifying the relationships which existed between the major objective groups

and to the objectives within each major group. Utilizing the triangle in Figure 1 and the lists of distributed needs presented in Appendix "C", the reader can identify the needs unique to each category and the degree to which some needs share their uniqueness with another category.

Stating Key Factors

Key factors might best be defined as "statements, written in question form, posed by members of the organization and designed to elicite qualitative responses from the respondent(s)." The key factors. . .

> . . .describe the success or failure of [the] organization.
>
> . . .always relate to one or more objectives for many programs.
>
> . . .describe success or failure in terms of or the degree of objective attainment.
>
> . . .describe the effectiveness of the organization.
>
> (Jarett, et al., 1970)

Three key factor questions were developed by the staff members of the Health Occupations Cluster Curriculum Project and the Health-Care Aide Curriculum Project to assist the two groups in determining the effectiveness of the yet-to-be identified programs. One key factor question was written for each of the three major groups of objectives and served to stimulate one of three generalized responses concerning the condition of a given group of objectives. The three suggested qualitative responses to the key factor questions were "very good," "fair" and "poorly." The key factors are as follows:

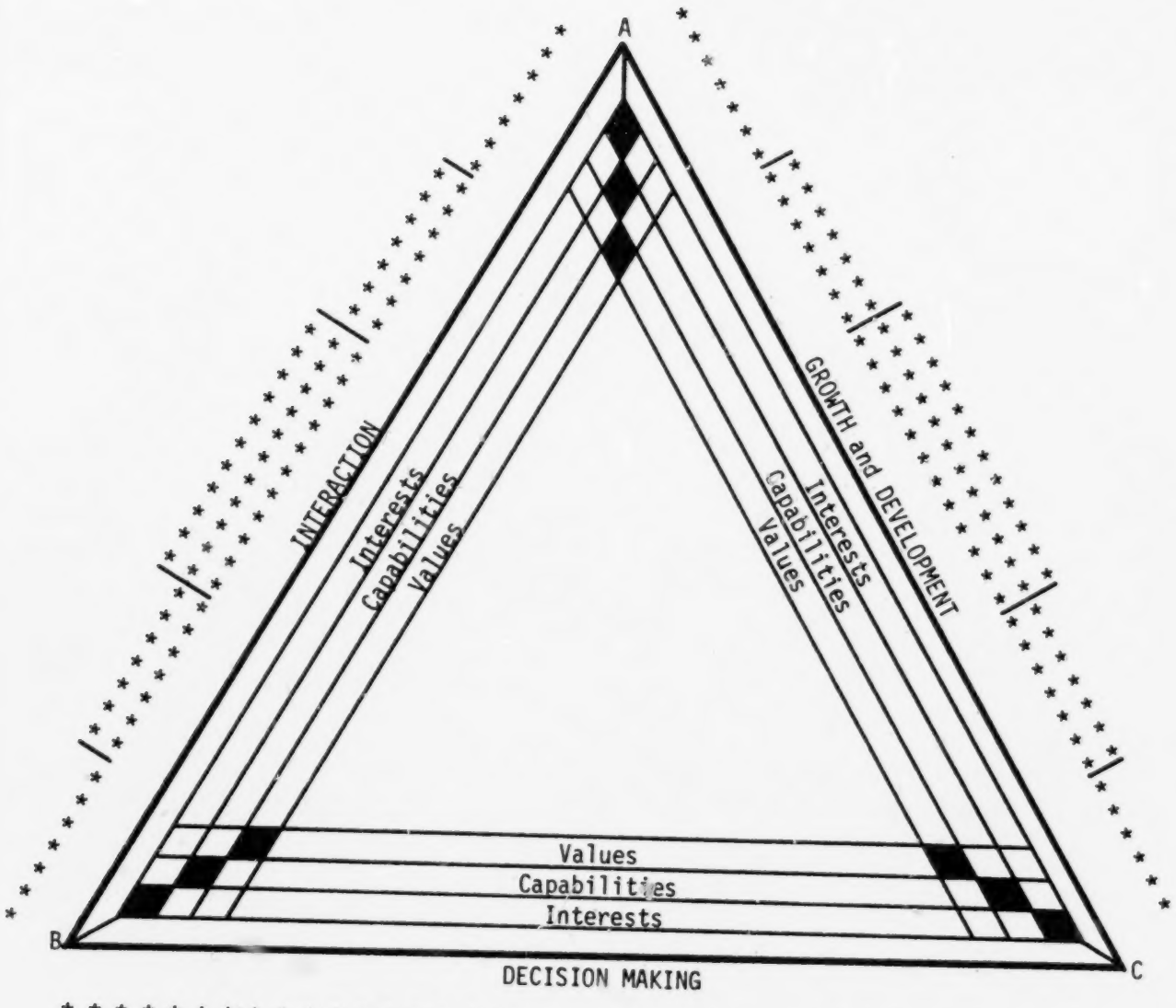


Figure I - Representation of the Grouping
of Social Objectives

". . .With regard to each individual's interests, capabilities and values, how is career-related PERSONAL INTERACTION going today? . . ."

". . .With regard to each individual's interests, capabilities and values, how is career-related DECISION MAKING going today? . . ."

". . .With regard to each individual's interests, capabilities and values, how is career-related GROWTH and DEVELOPMENT going today?. . ."

Indentifying Key Indicators

Key indicators are quantifiable measures which indicate the effects of selected programs on filling the needs of society. The data provided by the key indicators serve as the basis for formulating the qualitative responses to the key factor question. Key indicators. . .

. . .are measures of movement within a key factor.

. . .are those quantifiable items of information which collectively support the key factors.

. . .describe change.

. . .may relate to more than one key factor. (Jarett et.al., 1970)

Six key indicators were developed to assist in evaluating the total effect of the programs being proposed for the "Careers Cluster Curriculum Model." Long-range key indicators were identified since the accumlated effects of the proposed model would require time to manifest themselves in society. The selected key indicators are as follows:

Educational Performance Standards. Within a reasonable amount of time, the number of dropouts,class cuts, expulsions from school and absenteeism will be expected to decrease significantly among those students participating in the programs of the proposed career model. Student interest and enrollment in career-related, extra-curricular activities should increase.

Youth Employment Rates. The number of applicants for and participants in part-time and summer employment should increase. Likewise, the number of qualified applicants for entry-level occupations in all areas of work should also increase. Unemployment among youth should generally decrease.

School-Employment Transition Duration. The elapsed time between high school graduation and entry into the labor market or a post-secondary educational program of study will decrease.

Full-Time Employment Rates. The employment records of individuals who have been enrolled in career education programs should reveal a marked decrease in the number of days absent from work per year when compared to the employment records of individuals who have not been in the career education sequence.

Seven-Year Income Trends. Average income over a seven- year period for persons who have participated in the career programs

should be higher than the average income of persons who have not participated.

Five-Year Trends for Additional Career Education. Within five years of completing the career education sequence provided in the career model, the number of participants enrolling in continuing adult career education programs should increase.

Establishing Program Goals

Three program goals were established by the members of the two health curriculum groups. The three goals collectively served to guide in the identification and development of the career-related programs proposed by the two groups. Each goal was a direct outgrowth of the statement of organizational purpose, since each stressed an evolutionary career experience for the individual, based on his personal interests, capabilities and values. Each goal differed from the other in that the first stressed the individual's need for personal interaction in the total career education experience; the second, the individual's need for decision making in the total career education experience; and the third, the individual's need for physical, mental, and social growth and development in the total career education experience.

The goals are as follows:

". . .To maximize the opportunities for each individual to gain an awareness of, explore, evaluate and implement

his own interests, capabilities and values by providing learning experiences designed to assist him in meeting his career-related needs for personal INTERACTION . . ."

". . .To maximize the opportunities for each individual to gain an awareness of, explore, evaluate and implement his own interests, capabilities and values by providing learning experiences designed to assist him in meeting his career-related needs for personal DECISION MAKING . . ."

". . .To maximize the opportunities for each individual to gain an awareness of, explore, evaluate and implement his own interests, capabilities and values by providing learning experiences designed to assist him in meeting his career-related needs for personal GROWTH and DEVELOPMENT . . ."

Identifying Career Axes and Component Program Modules

Instead of identifying titles of career education programs per se to meet the above stated goals, a series of career cluster axes and defined career modules evolved as products of the KFA technique employed in this study. Five career cluster axes, five developmental career component modules, and two auxiliary career component modules comprised the total product list. Three entry-level employment options (in essence, they also were program modules) were identified as integral parts of the fifth developmental module. The completed list is presented below:

A. Career Cluster Axes
   1. Applied Biological and Agricultural Careers Cluster Axis
   2. Business, Marketing and Management Careers Cluster Axis
   3. Health Careers Cluster Axis
   4. Industrial-Oriented Careers Cluster Axis
   5. Personal and Public Service Careers Cluster Axis

B. Developmental Career Component Modules
   1. Elementary School-Based Career Component Module
   2. Secondary School-Based Career Component Module
   3. Secondary School and Community-Based Career Component Module
   4. Community-Based Career Component Module
   5. Occupational Entry-Level Career Component Module
      a. Extended Self-Actualization Option
      b. Long-Range Occupational Employment Option
      c. Immediate Occupational Employment Option

C. Auxiliary Career Component Modules
   1. Career Guidance Component Module
   2. Related Academic Subject Matter Nodes

Defining the Components of the Career Model

Rather than proposing learning activities and developing content for each of the program components, the individual components were defined in terms of the limits of their responsibilities. Since the Career Cluster Axes were already defined by title, the major effort was given to defining the Developmental and Auxiliary Career Component Modules and Related Academic Subject Matter Nodes. Establishing a definition for each of the components of the career model mandated

(1) writing the parameters for each component module and (2) writing the developmental tasks for each component module.

List of Parameters

The lists of parameters for each of the five developmental and two auxiliary component modules are listed below.

A. Developmental Career Component Modules

1. Elementary School-Based Career Component Module

a. Provisions for students to meet their career-related, self-actualization needs.

b. Provisions for modifying, adapting and/or relating traditional subject matter content and learning experiences to a central career education theme.

c. Provisions for students to acquire basic occupational and career guidance needs.

d. Provisions for home, school and community involvement.

e. Career-related learning activities parallel the developmental life stages of the student.

f. Activities related to "self" and "self-concept" formation as they relate to the world of work.

g. Emphasis on attitudinal development, enhancement, and/or modification.

h. Behaviorally-oriented learning materials.

2. Secondary School-Based Career Component Module

a. Provisions for students to seek employment in, work in, and resign from an ongoing, simulated, school-based enterprise.

b. Provisions for students to assume various occupational roles in an ongoing, simulated school-based enterprise setting.

c. Provisions for modifying, adapting and/or relating traditional subject matter content and learning activities to the ongoing, simulated, school-based enterprise.

d. Provisions for students to acquire information necessary to the conduct and control of the ongoing, simulated, school-based enterprise.

e. Provisions for students to experience the types of learning and study necessary for preparation for a given occupation or cluster of occupations.

f. Provisions for students to acquire occupational and career guidance information.

g. Career-related learning activities parallel the developmental life stages of the students.

h. Emphasis on attitudinal development, enhancement and/or modification.

i. Behaviorally-oriented career program of study.

2. Secondary School and Community-Based Career Component Module

a. Provisions for students to establish, conduct and liquidate a simulated, school and community-based enterprise.

b. Provisions for students to assume various occupational roles in an ongoing, simulated, school and community-based enterprise setting.

c. Provisions for modifying, adapting and/or relating traditional subject matter content and learning activities to the ongoing, simulated, school and community-based enterprise.

d. Provisions for students to acquire additional information necessary to the conduct and control of the ongoing, simulated, school and community-based enterprise.

e. Provisions for students to gain additional experience in the types of learning and study necessary for preparation for a given occupation or cluster of occupations.

f. Provisions for students to acquire additional occupational and career guidance information.

g. Additional emphasis on attitudinal enhancement and/or modification.

h. Career-related learning activities parallel the developmental life stages of the students.

i. Behaviorally-oriented career program of study.

4. Community-Based Career Component Module

a. Provisions for students to observe, interact with and share in the occupational experiences of people employed in an ongoing, community-based real world enterprise.

b. Provisions for modifying, adapting and/or relating traditional subject matter content and learning activities to ongoing, community-based real world enterprises.

c. Provisions for students to acquire additional information necessary to the conduct and control of the ongoing, community-based real world enterprise.

d. Provisions for students to gain additional experience in the types of learning and study necessary for preparation for a given occupation or cluster of occupations.

e. Provisions for students to acquire additional occupational and career guidance information.

f. Additional emphasis on attitudinal enhancement and/or modification.

g. Career-related learning activities parallel the developmental life stages of the students.

h. Behaviorally-oriented career program of study.

5. Occupational Entry-Level Employment Module

a. Provisions for meeting additional career-related self-actualization, exploration and evaluation and implementation needs.

b. Provisions for meeting long-range career planning and occupational employment needs.

c. Provisions for meeting immediate employment needs.

d. Provisions for the student to acquire the information necessary for performing and progressing in a selected occupation or career cluster.

e. Provisions for students to acquire additional occupational and career guidance information.

f. Provisions for maximum vertical and horizontal occupational mobility i.e., a minimum number of terminal programs.

g. Provisions for immediate employment regardless of the occupational option selected or the level of achievement attained.

h. Provisions for developing individualized occupational programs of study.

i. Provisions for program entry based on past levels of achievement and/or demonstrable competency.

j. Emphasis on occupationally-based cognitive and psychomotor behavior modification and/or reinforcement.

k. Career-related learning activities parallel the developmental life stages of the students.

l. Behaviorally-oriented career program of study.

m. Competency-based career program of study.

B. Auxiliary Career Component Modules

1. Career Guidance Component Module

a. Provisions for identifying, gathering, maintaining and reporting accounts of the immediate and long-range occupational employment needs of society.

b. Provisions for identifying, gathering, maintaining and reporting accounts of the interests, capabilities and preferences of the individual regarding his perceived immediate and long-range career plans.

c. Provisions for the student to progress from vicarious to simulated to real world career-based learning experiences.

d. Provisions for utilizing home, school and community-based career and occupational learning resources.

e. Provisions for the student to gain experience in the types of learning and study necessary for preparation for a given occupation or cluster of occupations.

f. Provisions for the student to identify personal career and occupational preference(s) based on his personal interests, capabilities, values and experiences.

g. Provisions for gathering, maintaining, reporting and up-dating the progress of individuals in attaining their career or occupational goals.

h. Provisions for the individual to acquire the information necessary for performing and progressing in a selected occupation or cluster of occupations.

2. Related Academic Subject Matter Nodes

a. Provisions for adapting and relating traditional subject matter content to the ongoing, simulated and real world learning enterprise.

b. Provisions for students to acquire information necessary to the conduct and control of the ongoing, simulated and real world enterprise.

c. Provisions for students to experience the types of learning and study necessary for preparation for a given occupation or cluster of occupations.

d. Provisions for career and occupation-related study in a controlled learning environment.

e. Provisions for parallel evolution of subject matter as the student progresses along a given career axis.

Lists of Developmental Tasks

The lists of developmental tasks for each of the five developmental career component modules are listed below. The developmental tasks for the Elementary School-Based Career Component Module were adopted directly from "A Curriculum Model For Facilitating Career Development (Bailey, 1971).

A. Developmental Career Component Modules

1. Elementary School-Based Career Component Module

   a. Becoming aware of self and the world of work.

   b. Relating growing knowledge of self and the world of work to the process of career development.

   c. Preparing to make an intelligent choice of career.

2. Secondary School-Based Career Component Module

   a. To gain an awareness of one's own interests, capabilities and values through career-related personal INTERACTION with others in a school-based, simulated work setting.

   b. To gain an awareness of one's own interests, capabilities and values through career-related personal DECISION MAKING in a school-based, simulated work setting.

   c. To gain an awareness of one's own interests, capabilities and values through career-related personal GROWTH and DEVELOPMENT in a school-based, simulated work setting.

3. Secondary School and Community-Based Career Component Module

   a. To explore the range of one's own interests, capabilities and values through career-related personal INTERACTION with others in a school and community-based, simulated and real world work setting.

   b. To explore the range of one's own interests, capabilities and values through career-related personal DECISION MAKING in a school and community-based, simulated and real world work setting.

   c. To explore the range of one's own interests, capabilities and values through career-related personal GROWTH and DEVELOPMENT in a school and community-based, simulated and real world work setting.

4. Community-Based Career Component Module

   a. To evaluate one's own selected interests, capabilities and values through career-related personal INTERACTION with others in a community-based, real world work setting.

b. To evaluate one's own selected interests, capabilities and values through career-related personal DECISION MAKING in a community-based, real world work setting.

c. To evaluate one's own selected interests, capabilities and values through career-related personal GROWTH and DEVELOPMENT in a community-based, real world work setting.

5. Occupational Entry-Level Employment Module

a. To implement one's own selected occupational interests, capabilities and values through personal INTERACTION with others in a real world work setting.

b. To implement one's own selected occupational interests, capabilities and values through personal DECISION MAKING in a real world work setting.

c. To implement one's own selected occupational interests, capabilities and values through personal GROWTH and DEVELOPMENT in a real world work setting.

The establishment of the parameters for the developmental and auxiliary career component modules, together with writing the developmental tasks for each developmental career module, concluded the conduct of the Key Factor Analysis as it was employed in this study. With the components of the proposed career model identified, the task of ordering them fell to the members of the Health Occupations Cluster Curriculum Project staff. Studies by Super, Tiedemann, Ginzberg, Jordaan, Holland, Hansen, Crites and Havighurst, together with selected writings and presentations by authors from the fields of education, guidance, medicine, psychology government and philosophy, provided the documentation necessary to order and defend the proposed model. The following section discusses the contributions of each in detail.

Review of the Literature

Early Influences

It has not been the intention here to provide a general review of the literary milestones in career development, since this has been done admirably by such other writers as Crites (1968), Borow (1964), Osipow (1968), Zaccaria (1970), Zytowski (1968), and Roth, Hershenson, and Hillard (1970). Rather, the purpose here is to focus on those theories and constructs which have influenced the development of this model.

Prior to 1951, the authors of most vocational behavior publications and source materials adressed themselves to various aspects of either vocational psychology or education, although Parson's early work (1909) is generally credited with the eventual shaping of subsequent vocational inquiry toward understanding the complex nature of man at work.

Charlotte Buehler (1933) pioneered the socio-economic career development theories based on life stages of the individual. However, it was up to Eli Ginzberg and his associates (1951) to draw the previous flurries of vocational research activity into sharp focus by providing an explicit and comprehensive theory of vocational behavior in which career development is viewed as an irreversible decision-making process occurring over specified life stages.

Following Ginzberg, et.al., Professor Super (1951; 1952; 1953; 1955) drew heavily upon both the Ginzberg research team and Buehler (and others) but added a missing ingredient: the self concept theory. Super regarded career development as a largely exploratory process in which the individual matures as he passes through a series of life stages, each stage having developmental tasks, and each corresponding to some phase of the development of the self-concept. The vocational self is seen as the central concern of identity: ". . . work roles are among the most important in modern society and provide a focus for the study of self concepts and of the processes of the development of selfhood." The basic theme of Super's theory, however, is that "the individual chooses occupations whose characteristics will allow him to function in a role that is consistent with his self-concept, and that the latter conception is a function of his developmental history."

Super's theory is regarded as the most comprehensive and valid explanation of vocational behavior currently available (Bailey and Stadt, 1972). It is for this reason the bulk of guiding effort in developing this model was provided by Super and his associates. While other studies reviewed are eclipsed in scope and magnitude by Super's overall scheme of career development, many are related to different stages of Super's basic theory and will be discussed accordingly.

Lifestage Theory Development

Early attempts to explain human development in terms of time periods and life stages are plentiful, but Buehler (1933) was the first to define the stages within the socio-economic expectations of the individual (growth, exploration, establishment, maintenance, and decline).

Havighurst (1964) posited six stages of vocational development: identification with a worker, acquiring the basic habits of industry, acquiring identity as a worker in the occupational structure, becoming a productive person, maintaining a productive society and contemplating a productive and responsible life.

Miller and Form (1951) saw five life stages: preparatory, initial, trial, stable, and retired.

Super et.al. (1957), utilizing Buehler's system, defined five stages of vocational development: growth (conception to age 14), exploration (ages 15 to 24), establishment (ages 25 to 44), maintenance (ages 45 to 64), and decline (age 65 and above).

Super incorporated into his system the definition of three stages in the occupational choice process which Ginzberg et.al. (1951) had suggested: fantasy (ages 6 to 11), tentative (ages 11 to 17), and realistic (above age 17). Super (1951) furthermore introduced the concept of vocational maturity as an index of development based upon mastery of specified tasks within each of the substages described as part of the five basic stages.

Self-Concept

Of the theories of occupational life reviewed, all theories include either or both of two views of the individual: structural or developmental. The structural view, according to Bordin et.al., (1963) ". . .analyzes occupations within some framework for conceiving personality organization . . , while the developmental view". . . attempts to portray the kinds of shaping experiences that can account for personality organization and concomitant vocational pattern."

Thus, Ginzberg, Tiedemann, Cass, O'Hara, Starishevsky and Matlin, and Jordaan all have a common developmental perspective in describing the process of acquiring self-knowledge and of implementing it.

While Ginzberg's formulations have virtually no structural assumptions, Super (1953, 1956), though emphasizing unconscious elements in the formations of self perceptions, present no explicitly formulated developmental theory. "The self concept," asserts Super, "is the result of the individual's interpersonal experiences, experiences of reflected evaluations and awareness of reference groups in family and community."

Although Super (1963) describes the self concept system as a continuing, lifelong process, its formation begins in infancy. The first phase and continuing process in the development of the self concept is exploration, wherein roles are "tried on" for size. Self-differentiation, when the individual recognizes himself as a person distinct from, but, at the same time, resembling other persons,

is seen as the second phase in the continuing development of the self-concept. Identification is another process which is closely related to self differentiation, but which centers on the individual's idea of the kind of person he is.

Role playing is a type of behavior which accompanies or follows identification. Reality testing stems as readily from role playing as role playing does from identification. Reality testing experiences strengthen or modify self concepts, and confirm or contradict the way in which they have been tentatively implemented. Once satisfactory translation of self concepts into occupational terms occurs, the result is the implementation or actualization of a self concept.

Tiedemann and his associates (Tiedemann and Pandit, 1958; O'Hara and Tiedemann, 1959; Kibrick and Tiedemann, 1961; Tiedemann and O'Hara, 1963) attempted to clarify and specify the nature of the series of decisions an individual makes along the course of career development. This process was seen as an individual's fashioning of a vocational identity through differentiation and integration of his personality when confronted with problems of work.

Tiedemann and O'Hara (1963, p.46) see an overall process: "Career development then is self development viewed in relation with choice, entry and progress in educational and vocational pursuits."

Jordaan (1963) offers a pragmatic definition and analysis of exploratory behavior and response as well as a reasonably inclusive

review of various approaches to the subject, describing the early efforts of Buehler (1933, 1935), Brewer (1932), and Miller and Form (1951), but highlighting the work of Berlyne, Ausubel (1954), and Baldwin (1955). Jordaan emphasizes the crucial role which self concept plays in all exploratory bahavior.

Occupational Decision Making and Choice

Sociologists, economists, and psychologists have all contributed theories on vocational choice and selection. Sociologists, such as Miller and Form (1951) and Caplow (1954) underline the forces of social structure as major determinants of occupational choice (structural), while psychologists, for the most part, stress the individual, his traits and needs (developmental).

Miller and Form (1951) see accident as the deciding factor in the occupational determination of most workers. In this fatalistic viewpoint, the wheel of fortune establishes family, race, and social class for the individual (hence educational and cultural opportunity), and to a great extent, the range of occupations that he might view as realistic considerations. From there, trial and error takes over.

Caplow (1954) and Hollingshead (1941), while recognizing the role of accident as an occupational determinant, also emphasize social status as the selective factor in occupational choice. Borow (1966), points out the role of acquired value systems that influence choice of occupations.

Blau et.al., have developed a "conceptual framework" for studying occupational choice, but stress that the framework is not a theory, but an ordered array of determinants of occupational choice (Blau, Gustad, Jessor, Parnes, and Wilcox, 1956). Roe (1956) indicates that needs are the major determinants of occupational choice, while Tyler (1961) states that career choice has more to do with personality. Holland (1959) presents a theoretical construct which specifies the relationship between an individual's personal orientation, the total occupational environment, and his resultant occupational choices.

Super observes that vocational choice can be best understood if personality is viewed in a psychoanalytic framework (Super and Bachrach, 1957). He sees the approach to personality as that of self; and more specifically, selfhood within a development context, striving toward self-actualization. The individual obtains satisfaction from his work which is proportionate to the degree to which he has been able to implement his self concept. In turn, the measure of success with which the individual is able to implement his self concept is the result of his decision-making history throughout the developmental process.

Starishevsky and Matlin restate Super's viewpoint of decision making:

> . . .the way in which a person has reacted in the past, constructing his formulation of the world, determines his future and his choice of occupation as part of that future. One can, then, view vocational choice as an expression of self concepts formulated and reformulated throughout the life stages. People differ both in their self concepts and in the ways in which they translate self concepts into occupational terms. Hence, people choose different occupations.

Other Materials

A request for career education curriculum materials from other states indicates that with several notable exceptions (Delaware, Georgia, Michigan, New Jersey, Ohio, Oklahoma, Oregon, and Wyoming) relatively few states have exemplary career development programs and fewer have produced materials in usable, published form. Of the programs and models reviewed, Bailey's "Career Development for Children," Oregon's "Self Understanding Through Occupational Exploration" (SUTOE), Oklahoma's K-12 model curriculum, Georgia's "Program of Education and Career Exploration" (PECE), New Jersey's "Career Development: A Preschool Through Adult Model Program," Illinois' "Enterprise: Man and Technology," and Winefordner's Ohio Vocational Interest Survey (OVIS) guidance inventory model were perhaps the most useful.

The proceedings from the Ohio State University Health Occupations Seminar (Nangle, 1967) and "A One-Week Institute to Develop Objectives and Models for a Continuous Exploratory Program Related to the World of Work from Junior High to Senior High School" (Bottoms, 1969) offered perspective; as did the collected reprinted speeches of Sidney P. Marland, United States Commissioner of Education, and a general review of contemporary thought in public school curriculums (Short and Marconnit, 1971).

Conclusion While this review for the most part seems to merely skim the content of the rapidly growing store of resources on career development, at the same time it must be remembered that the literature

noted herein points only to the development of an educational process; not to identifying educational content. From the basic theories reviewed, an exoskeleton which parallels the developmental stages in the life of the individual has been structured. Next, the form must be filled with content, which will undoubtedly require a second comprehensive survey of the literature related to curriculum and program development in career education.

Assumptions, Pitfalls and Parameters

The following lists represent the collective thoughts of the staff members of the Health Occupations Cluster Curriculum Project and Health-Care Aide Curriculum Project regarding the development of the proposed "Comprehensive Careers Cluster Curriculum Model." The assumptions serves as the accepted base on which the model was developed. The pitfalls indicated assumptions to be avoided. The parameters defined the perceived limits of responsibility of the total model.

Assumptions

1. The individual is the center of all career activity.
2. Each individual differs in his abilities, interests, and capabilities.
3. Each individual is qualified, by virtue of these characteristics, for a number of different occupations.
4. Occupations require a characteristic pattern of abilities, interests, and personality traits with tolerances wide enough to allow both some variety of occupations for each individual and some variety of individuals in each occupation.
5. Career development is a cumulative, lifelong, evolutionary process.
6. Career development is an evolution of dynamic processes consisting of developmental tasks at various stages in the individual's life.
7. An individual's career development may be systematically influenced through personal involvement, decision making, interaction, learning and experience in simulated and/or real world career-oriented experiences.

Pitfalls

1. To assume that an occupation is static rather than dynamic.
2. To assume that any occupation is terminal.
3. To assume that career education restricts the individual's opportunity to experience and choose.
4. To assume that career education is complete once the individual has selected an occupation.
5. To assume that maintaining an occupational objective is necessarily good.
6. To assume that an early occupational commitment is necessarily good.
7. To assume that knowledge alone serves as an adequate base for occupational choice.
8. To assume that the occupation is solely an activity comprised of and influenced by its tasks.
9. To assume that any vocational or occupational choice is a mutually exclusive, discrete event.
10. To assume that an emphasis on psychomotor skill development and the acquisition of technical knowledge brings about desired attitude changes and ordering of values.

Parameters

1. Provisions for continuous, lifelong, career-related education and guidance.
2. Provisions for students to derive experiences from each of the five career cluster axes.
3. Provisions for earlier career-exploration experiences which provide the basis for future occupational decision making.
4. Provisions for students to move from a simulated, career-related educational setting.
5. Provisions for modifying, adapting and/or relating traditional subject matter content and learning experiences to a central career education theme.

6. Provisions for students to experience the types of learning and study necessary for preparation for a given occupation or cluster of occupations.

7. Provisions for relating the career and occupational activities common to two or more career cluster axes.

8. Provisions for (1) pre-specialized and (2) specialized career-related learning activities.

9. Provisions for students to meet their career-related, self-actualization needs.

10. Provisions for students to assume various occupational roles in an ongoing, simulated enterprise setting.

11. Provisions for students to observe, interact with and share the occupational experiences of people employed in an on-going, real world enterprise.

12. Provisions for meeting extended career-related, self-actualization, exploration and evaluation needs.

13. Provisions for meeting long-range career planning and occupational employment needs.

14. Provisions for meeting immediate employment needs.

15. Provisions for home, school and community involvement.

16. Development of a behaviorally-oriented model.

The Comprehensive Careers Cluster Curriculum Model

Career education is the term used to denote. . .

> . . .the total effort by educational agencies and communities in presenting organized career-oriented activities and experiences to all persons from nursery school through adulthood, and orients the entire educational plan into one unified career-based system. (Illinois Division of Vocational and Technical Education, 1972)

Aspects of the Total Model

The proposed Comprehensive Careers Cluster Curriculum Model is a conceptual model designed to assist children and adults alike. . .

> . . .to gain an awareness of, explore, evaluate and implement their own interests, capabilities and values through personal interaction, decision making and growth and development in simulated and real world career related experiences.

The model, as stated earlier in the report, includes a series of five career cluster axes. Each axis has five developmental career component modules and two auxiliary career component modules distributed along its length. Three entry-level employment options, which serve as integral parts of the fifth developmental module, are also included. In review, the list includes the following:

A. Career Cluster Axes
   1. Applied Biological and Agricultural Careers Cluster Axis
   2. Business, Marketing and Management Careers Cluster Axis
   3. Health Careers Cluster Axis
   4. Industrial-Oriented Careers Cluster Axis
   5. Personal and Public Service Careers Cluster Axis

B. Developmental Career Component Modules
   1. Elementary School-Based Career Component Module
   2. Secondary School-Based Career Component Module
   3. Secondary School and Community-Based Career Component Module
   4. Community-Based Career Component Module
   5. Occupational Entry-Level Career Component Module
      a. Extended Self-Actualization Option
      b. Long-Range Occupational Employment Option
      c. Immediate Occupational Employment Option

C. Auxiliary Career Component Modules
   1. Career Guidance Component Module
   2. Related Academic Subject Matter Nodes

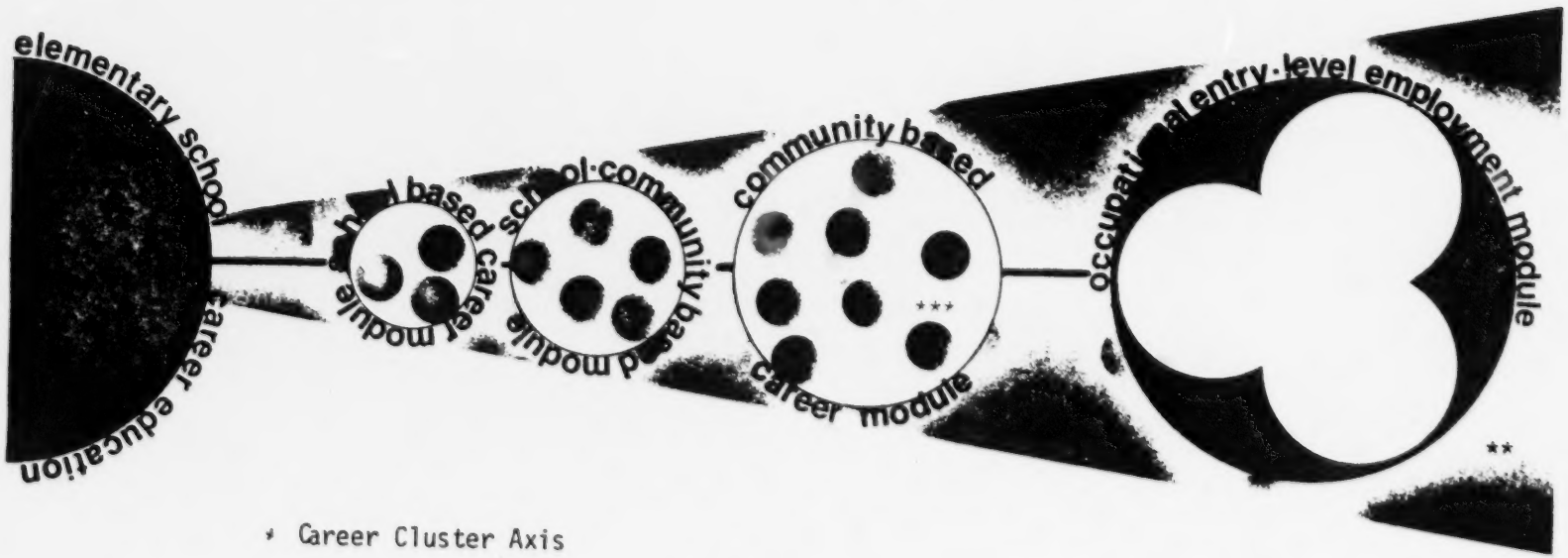
Figure II depicts the developmental and auxiliary components of the model as they are distributed along a given career axis. A pictorial representation of the complete Comprehensive Careers Cluster Curriculum Model appears in Figure III.

Being grounded in the elementary school career education program (kindergarten through grade seven), and ordered in accordance with theories advanced by Super, Kratwohl, et.al., the proposed curriculum model undertakes to provide students beyond grade seven with career-related learning activities in each of five major occupational categories.* The model structures the entire school program around the central theme of career education and directs traditional subject matter content toward career and occupationally related learning objectives. The model also makes provision for learning to occur in both the school and community by systematically moving the student from a learning environment which simulates real world activities to one which exists wholly in the real world. With a few minor exceptions, the learning activities which occur from kindergarten through grade eight are founded within the school. Beyond grade eight, the activities of the students gradually move out of the classroom and into an actual occupational setting.**

---

* The proposed model is designed to accomodate five major occupational categories. With slight modification, the model can be restructured to accomodate the fifteen occupational categories defined by the Office of Education, the nine occupational categories recommended by the Department of Labor, or any other occupational classification system.

** At this point, the reader might want to review "Assumptions, Pitfalls and Parameters," pages 30-32.



* Career Cluster Axis

** Career Guidance Component Module

*** Related Academic Subject Matter Nodes

Figure II-A REPRESENTATION OF A SINGLE CAREER CLUSTER AXIS WITH COMPONENT MODULES

Figure III-A REPRESENTATION OF COMPREHENSIVE CAREER CURRICULUM MODEL

Personal and Public Service Careers Cluster Axis
Applied Biological And Agricultural Careers Cluster Axis
Industrial-Oriented Careers Cluster Axis
Business, Marketing And Management Careers Cluster Axis
Health Careers Cluster Axis

Certain aspects of the total model are more easily perceived when only one of the five career axes is the center of discussion. The reader must recognize, however, that the following sections pertain to the career model as a whole and not to any one career axis.

Grade Levels: The proposed curriculum model originates in kindergarten and extends beyond to meet the formal educational requirements of any and all occupations (See Figure IV). The Elementary School-Based Career Component Module includes kindergarten through grade seven. The Secondary School-Based, Secondary School and Community Based, and the Community-Based Career Component Modules respectively, house the eighth, ninth and tenth grade career education courses.

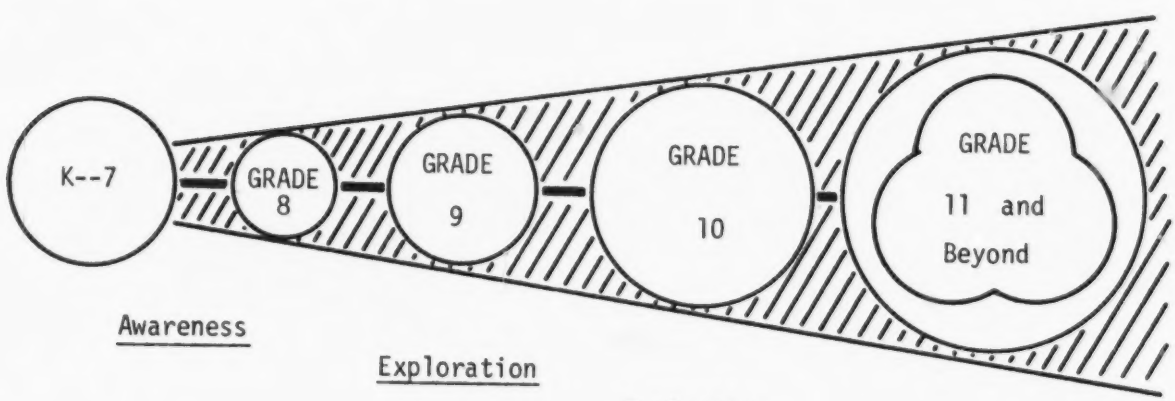


Figure IV - Grade Level

The Occupational Entry-Level Employment Module continues the student's career education into grades eleven and twelve. However, the three career options which comprise this latter module have educational implications for the individual which might extended his career education to

as many as ten or twelve years beyond high school graduation. This, of course, is wholly dependent on the occupational aspirations of the person involved. The three career options are discussed in greater detail in the Developmental Career Component Modules section, pages 40-52.

Kindergarten through grade nine would be a common educational experience for all students. In grades eight and nine, however, the student is involved with orientation and exploratory learning experiences as they pertain to each of five career clusters. The elementary school career education program focuses on work and career and occupational activities in general, with little if any attention being given to specific occupations or their classification systems. At the end of his ninth grade experience, each student is posed the following question: "What occupational area do you prefer?". Once he indicates his preference in one or two of the five career clusters, he is enrolled in the appropriate Community-Based Career Module(s) at the tenth grade level. See Figure V.

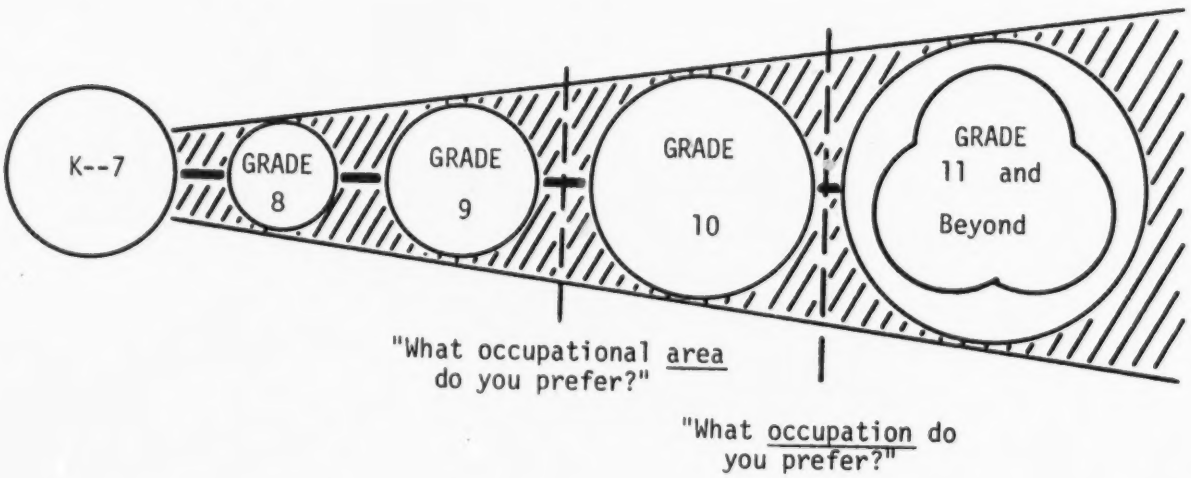


Figure V - Career Guidance Indicators

At the end of the tenth grade, the student is posed a second, more specific question: "What occupation do you prefer?". The response immediately sets into motion a customized but flexible occupational education program aimed at satisfying the immediate employment needs of the student, and which, at the same time, provides him with a program of study that will assist him in attaining his long-range career goals. Thus, his response to this question has immediate and long-range implications for both the individual and the educational system. The program might necessitate only a two or three-week period for preparation and entry into a given occupation or it might demand many years of study and work before the occupational goals are realized. Again, a detailed discussion of the three career options available in the Entry-Level Employment Module is presented later in this report.

Behavioral Emphasis: The proposed curriculum model parallels the developmental life stages defined by Super and reflects the classification of affective objectives prescribed by Kratwohl, Bloom and Masia. The learning activities assigned to the Elementary School-Based, Secondary School-Based, Secondary School and Community-Based, and Community-Based Career Component Modules (K-10) are directed at the development, modification and/or enhancement of the affective behavior of youth. Beyond grade ten, the career-related learning activities defined in the Entry-Level Employment Module focus on the acquisition of knowledge and development of skills necessary for employment (see Figure VI).

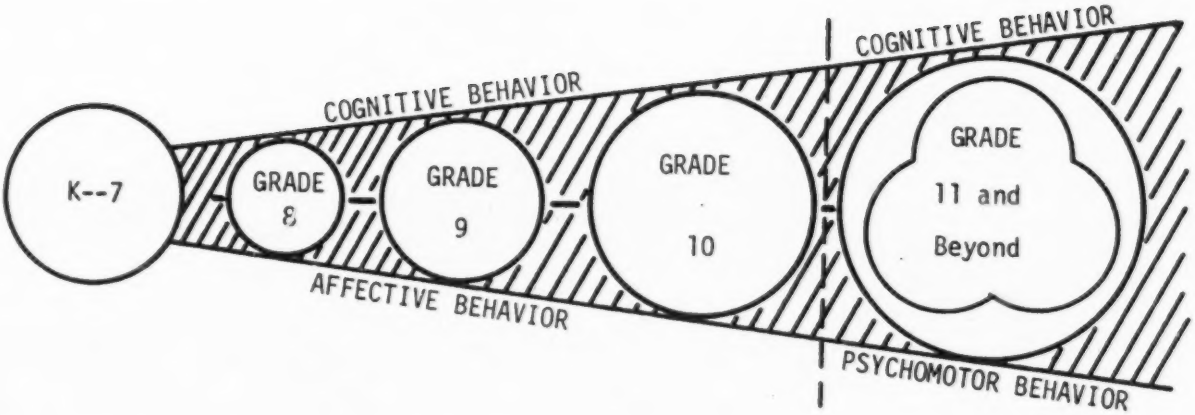


Figure VI - Behavioral Emphasis

In sum, the Comprehensive Careers Cluster Curriculum Model has a two-fold effect: (1) the model restructures the efforts, activities and content of present-day educational curriculum from kindergarten through the various stages of professional preparation and training around the central theme of career education, and (2) the model affords students a multitude of career-related experiences which will serve them as a basis for making future occupational decisions.

Developmental Career Component Modules

The yet-to-be developed course offerings for each of the five developmental career component modules will guide the students from an awareness of career-related activities with all of the people and things involved in them, to exploratory and evaluatory kinds of learning and work experiences, to an eventual realization of a career choice. The proposed career education experience begins in the early childhhod years

and serves as the predominant theme throughout the educational life of the individual. While each of the individual career component modules is unique in its own right, the modules also share a number of common traits. Each module makes provision for modifying, adapting and/or relating traditional subject matter content to the central theme of career education. In similar fashion, it offers the student opportunity to experience the types of learning activities required of him if and when he elects to prepare for employment in a given occupation or occupational area. The learning activities are structured so that they parallel the developmental life stages of the individual and are identified in terms of the behavioral objectives developed for each career module.

Each of the developmental stages represented by the respective <u>developmental</u> component modules focuses on two areas of learning: <u>selfhood</u> and <u>reality</u>. See Figure VIII. No study of the real world of work (reality) can be very meaningful unless the individual

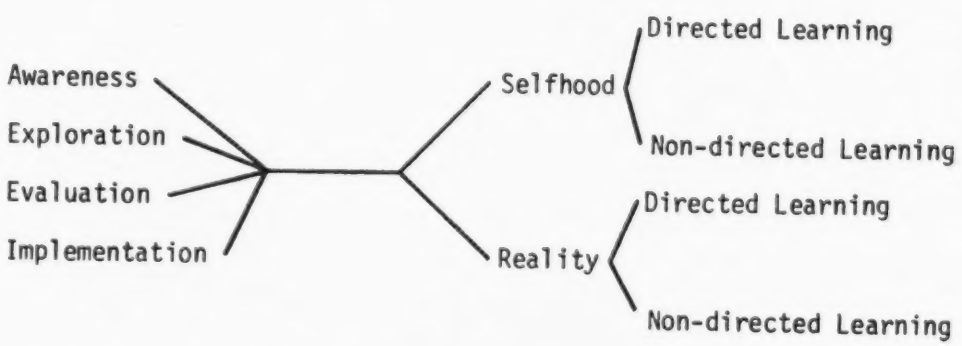


Figure VIII - A Representation of the Learning Relationship of Selfhood and Reality

can relate himself to it in some manner. Each of the two areas (self and reality) may be further divided into two areas of learning: directed (structured learning activities) and non-directed (synergistic learning activities).

Directed learning may be expressed with relative ease in the form of behavioral objectives. For example, within the Awareness stage, one behavioral objective taking into account the directed learning of occupational reality of the health field might be

> . . .the student will list from memory the primary occupational titles of fifteen health occupations not requiring preparation beyond high school. . . .

However, the non-directed part of the learning process awareness of self in more subjective and qualitative by nature. For example, one non-directed objective sought through the student's interaction with data, people and things, and structured around creating his awareness of self might be for the student

> . . .to recognize his own feelings of security or insecurity as a person more inclined to living things than to machines. . .

. . .or vice-versa. In other words, to get him to ask the question, "Hey, is this the real me? How much so?"

Students learn more than they are taught. This concept must not only be recognized but capitalized upon and used to potentiate

the directed learning process. The degree to which a child has developed enough psychological security to stand by his own convictions without being narrow-minded may not be readily measurable, or even predictable. However, it should be no less an integral part of the learning process. Non-directed learning must complement and enrich directed learning.

Constant effort is also made to insure that the student receives continuous, relevant and up-to-date career and occupational guidance information.

Following is a discussion of the types of learning activities and experiences which are unique to each of the career component modules. By design, the experiences afforded the student as he progresses through these modules serve him as a basis on which to make future occupational decisions.

Elementary School-Based Career Component Module: The Elementary School-Based Career Component Module serves to provide the student with an initial awakening to the world of work about him. Bailey (1971) best summarizes the essence of elementary school career education:

> . . .the interests of the child in early elementary school are largely centered around himself, his family and his immediate environment. Since vocational maturity involves both knowledge of self

and the world of work, the early grades of school can use the natural self-interest tendencies of the child to build a foundation of information about both areas. He can begin to learn about himself as a person distinct from other children in the class, defined in part by his environment--his unique family, his unique home. At the same time, he can be exposed to broad concepts about the world of work in the context of his self-centered world--occupational roles of members of his family, of workers who come to his home, of people who serve him. As the child explores home, school, and community, the importance and interdependence of workers can be stressed. Youngsters should also be helped to develop positive attitudes toward the world of work and the value of each individual's contribution. By increasing the awareness of self and the world of work, children begin to see a positive relationship between the two. Finally, it is central at this level to cause students to consider and evaluate their occupational "Fantasy Preferences." Such preferences can serve as a base of knowledge from which to develop more realistic attitudes and understanding. . . .

. . .in the latter part of elementary school the child becomes increasingly responsive to the demands of his teachers and parents and pressures to perform well in school become acute. This stage appears right for introducing basic concepts of career development. Students should be made aware of the longitudinal, integrated, and dynamic nature of vocational behavior. Self appraisal, knowledge of the world of work, and perhaps school work as a whole, may become more meaningful as the student's attention is turned toward the future and his role in preparing for it. At this level the study and understanding of work roles are extended to include the concepts of job families and interest-area families. Self appraisal becomes more meaningful as individuals are caused to think about changes due to maturation and learning, and understand that certain self elements are related to various occupational roles. An attitude of "Planfullness" should be promoted by assisting students in making decisions and outlining future actions. Concrete experience continues to be an important part of the program with much more responsibility attached to role playing and reality testing.

Secondary School-Based Career Component Module: The central focus of the Secondary School-Based Career Component Module is on the involvement of the student in a school-based learning enterprise.* The purpose for involving the student in a learning activity of this type is to make him more aware of the many implications regarding man's total work effort. The simulated work environment common to all learning enterprises allows the student opportunity not only to experience the types of work activities common to the defined occupations in that enterprise, but also to perform the duties in situations closely akin to those at an actual work site. Other more generalizable occupational activities also receive attention in the School-Based career program. Since the proposed enterprise activity is considered "ongoing," each student who is involved in it must complete the process of "getting a job." This process requires the student to make application for work, be interviewed, be hired, receive training, work at an assigned activity, and, finally, resign from the position.

Secondary School and Community-Based Career Component Module: Unlike the above module, the objectives of the Secondary School and Community-Based Career Component Module required the students to establish, conduct, and liquidate a learning enterprise. Since the students are hired into an existing learning enterprise in the School-Based Module, they assume totally the responsibilities necessary for the conduct of the learning enterprise in the School and Community-Based Module.

---

* A learning enterprise is defined as an activity which ". . . simulates the conditions of business in the working world. Its purpose is to help students choose a satisfying occupation by having them work in a realistic setting that permits the playing of work roles." (Sullivan, 1971)

In a manner paralleling the one evidenced in the School-Based Module, students are provided additional opportunity to explore the many aspects of work. As in the above module, they receive the training necessary to prepare them for work in the selected enterprise. However, and of more importance, they experience again what it feels like to work with "those" kinds of people and "those" kinds of things in that work environment.

Together with the activities directly related to conducting the learning enterprise, the students gain an appreciation of the time and effort required in establishing an ongoing enterprise. Since the process is basic to our economic system, knowledge of it alone has much educational merit.

Up to this point (end of grade nine), all students have received equal educational fare. At the completion of grade nine, each student must respond to the question: "What occupational area do you prefer?". His response adds definition to his career education future.*

Community-Based Career Component Module: The Community-Based Career Component Module, as the name implies, focuses on the work activities of people in the community. Closely resembling a cooperative education or work-study program, the Community-Based Career Component Module makes provisions for students to observe, interact with and share the occupational experiences of people employed in a given occupation. The proposed Community-Based career education program

---

* Refer to "Grade Levels," pp. 37-39.

differs from the traditional cooperative education program in that it does not require students to become occupationally competent. Rather, it stresses more exploratory types of learning experiences, with people at work serving as the primary resource. The center of the student's learning activity in the Community-Based Module is founded in real world enterprises.

Once the student has completed the Community-Based career education program he is asked a second, more specific question: "What occupation do you prefer?". His response, again, assists him in better defining his educational future.*

Occupational Entry-Level Employment Module: The Occupational Entry-Level Employment Module is an extension of the four, pre-specialized career cluster curriculum modules and commences the occupational preparation of the student. The module is comprised of three program options: (1) Extended Self-Actualization Option, (2) Long-Range Occupational Employment Option and (3) Immediate Occupational Employment Option. The three proposed career options are designed to meet the needs of the student who wishes additional career exploration before making an occupational choice, the student who is quite sure of his occupational choice and wishes to begin preparing for it, or the student who has an immediate need for employment. Regardless of the option selected, however, one constant exists: the student will begin to

---

*Refer to "Grade Levels," pp. 37-39.

acquire the entry-level skills necessary for employment in the occupation or occupational area of his/her choosing.

A number of the provisions of the Community-Based Career Component Module are common to each of the three career options. In addition to preparing the student for employment, they also provide him with additional career and occupational guidance, the option to exit from the occupational program at any time with entry-level skills,the option to enter or re-enter the program at a point of demonstrable competence, and the opportunity to develop an individualized occupational program of study which allows him maximum vertical and horizontal mobility.

The unique contributions of the Community-Based module rest in the career options. As implied above, the three options offer alternatives to students with varying career and occupational needs. A detailed discussion of each option follows.

Extended Self-Actualization Option: The purpose of the Extended Self-Actualization Option is to provide an occupational program of study which (1) prepares the student for employment in a number of entry-level occupations in a given occupational area, and at the same time (2) allows him additional exploratory experiences through work in the selected occupations.

A sample Extended Self-Actualization Option spiral for entry-level occupations in the health area is presented in Figure IX.*

---

* An in-depth analysis and discussion of the development of the total "Health Careers Cluster Axis" is presently being written. It will appear as an interim report by the same name. Copies will be available through the Department of Occupational Education, School of Engineering and Technology, Southern Illinois University at Carbondale, 62901.

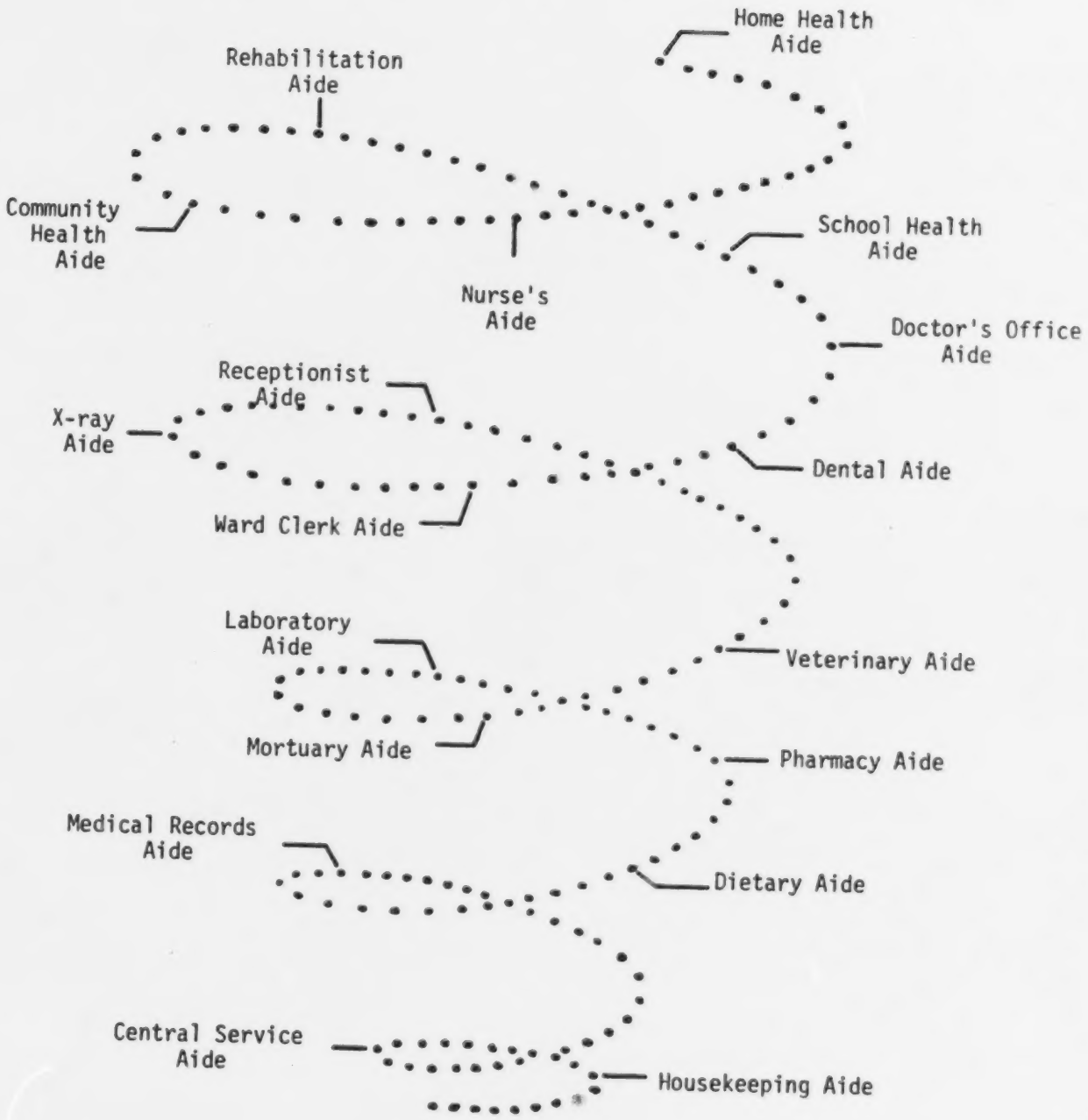


Figure IX - Extended Self-Actualization Spiral

The proposed behaviorally-oriented occupational program requires approximately the last two years of high school for completion. As the student progresses upward on the spiral, he acquires selected skills in defined occupations. The dots on the spiral represent the tasks of the individual occupations. As he moves through the various entry-level occupations, he also formulates opinions as to which type of work has greatest appeal to him. Once this decision is made, the student then moves into one of the programs offered in the Long-Range Occupational Employment Option.

Long-Range Occupational Employment Option: The purpose of the Long-Range Occupational Employment Option is to provide the student who has an established occupational goal with a program of study which(1) commences his occupational preparation and, concomitantly,(2) prepares him for employment in a number of en-route occupations should he leave the training program before reaching his sought objective. Figure X represents a proposed Long-Range Occupational Employment Option spiral for the dental-related occupations.

In grade eleven, the student begins to acquire the skills and information necessary for employment in the entry-level occupations noted at the lower end of the spiral. On completing the requirements of the high school portion of his occupational program of study, he then elects to go to work in the entry-level occupation(s) for which he is prepared, or he continues his formal preparation in the extended occupational program at the junior college level. Once the student completes the junior college requirements he again makes a decision as to whether to enter the labor force or continue his education toward his yet unrealized

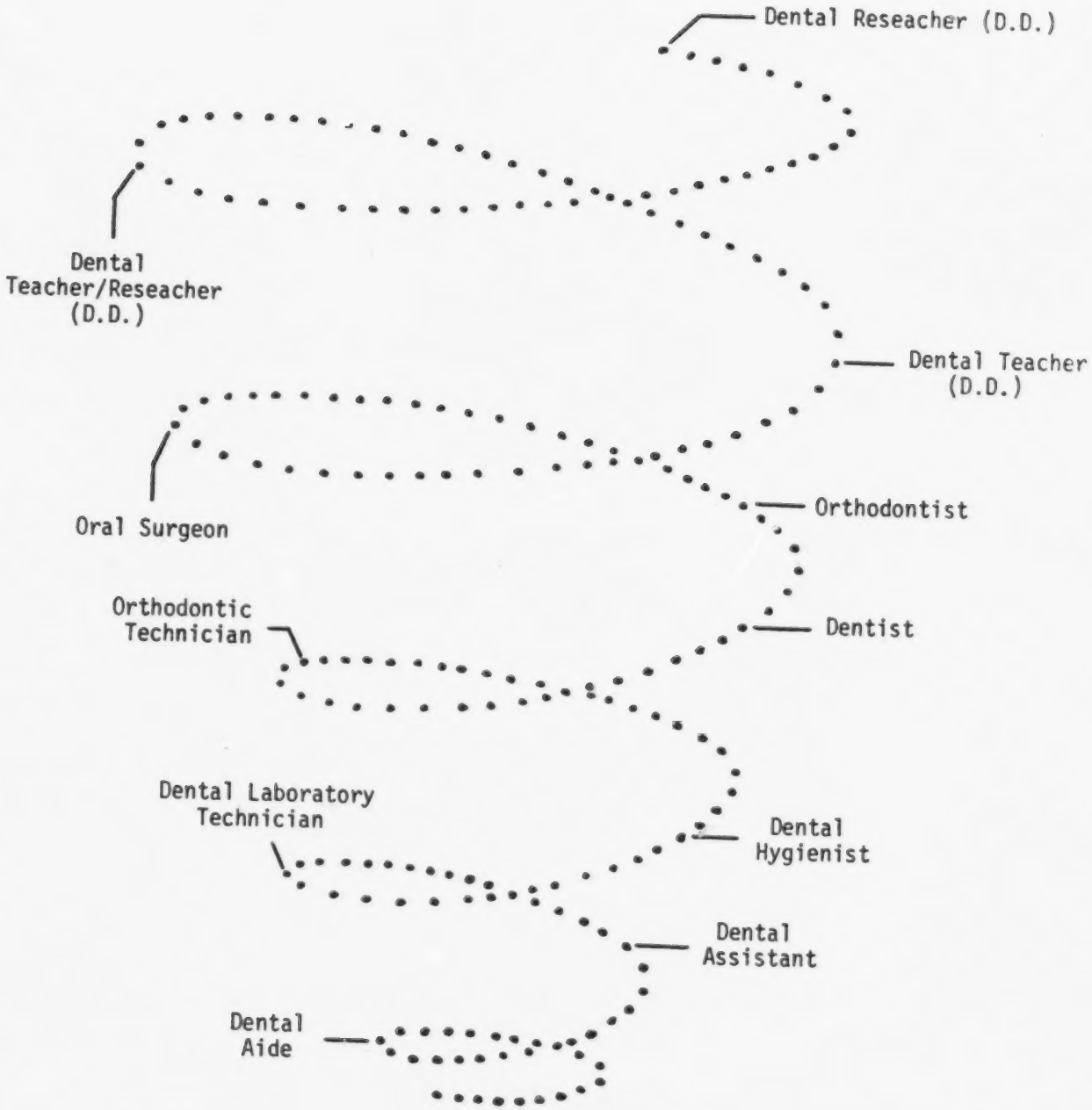


Figure X - Long-Range Occupational
Employment Spiral

occupational goal. The achievement of this goal marks the completion of the formal occupational education program.

Immediate Occupational Employment Option: The Immediate Occupational Employment Option is designed to assist students in meeting their immediate employment needs. Given training in one entry-level occupation selected from one of the occupational spirals of one of the Occupational Entry-Level Employment Modules of one of the five Career Cluster Axes, the student is prepared to go to work in that occupation. The number of clock hours required for training is kept at a minimum; in most cases, not exceeding twenty-five hours.

Once the student has completed the training program, it is expected that he will go to work. However, if he wishes to return to school for additional occupational education after working for a period of time, he can do so and will re-enter the program at a point of demonstrable competence.

This last employment option is not restricted by grade level. If a student has need for immediate employment, is of legal age, and has work available, he will receive the necessary training regardless of his number of years in school.

Auxiliary Career Component Modules

The Auxiliary Career Component Modules common to each of the five Career Cluster Axes of the proposed curriculum model play supportive roles to the Secondary School-Based, School and Community-Based, Community-Based, and Entry-Level Employment Modules of each career axis (See Figures II and III, pages 35 and 36, respectively). The Career Guidance Component Module provides guidance information and service to the student

throughout his formal career education program. The Related Academic Subject Matter Nodes accommodate the academic offerings so necessary to the success of the total career education of the individual.

Career Guidance Component Module: The Career Guidance Component Module, as its name implies, focuses on the career guidance and related informational contributions available to students as they progress through the course offerings of the career component modules. Included in the Career Guidance Module are provisions for identifying the employment needs of the community and coupling them with the immediate and long-range career plans for students. Also available are means for employing vicarious, simulated and real world based learning experiences in programs founded in the home, school and community. The usual career guidance provisions for occupational data acquisition and follow-up are also present.

Related Academic Subject Matter Nodes: The purpose of the Related Academic Subject Matter Nodes is to provide the student with information and instruction pertinent to the central theme of career education. Derived directly from the objectives specified in each of the developmental career component modules, the course objectives of the related academic subject matter nodes assist the student to better understand the many factors which direct and influence the ongoing activities in each career module. As expected, the nodal objectives change to meet the informational needs of the student as he progresses along a given career axis.

Coupled with the purpose of providing necessary career-related information, the learning activities in each of the nodes also allows the student opportunity to experience the types of learning he would encounter should he elect to prepare for a given occupation. For example, the student

preparing to be a laboratory technician experiences entirely different types of learning activities than does the student preparing for a career as a salesman. In many cases, the means to the occupational end serves as a major factor as to whether the end is ever realized. This fact dare not be avoided in a comprehensive career education program.

Courses which comprise the Related Academic Subject Matter portion of the total career education program are, in most cases, selected from the existing academic curriculum. As mentioned above, the original course content is altered in that the course objectives are derived directly from those defined in the respective career component modules. Courses are also included in the curriculum which relate the technical and human aspects of the world of work. These courses provide the student with a better understanding of the relationship of man and machine, and the effects of each on the existence of the other.

Summary

> . . . to maximize the opportunities for each individual to gain an awareness of, explore, evaluate and implement his own interests, capabilities, and values through personal interaction, decision making and growth and development in simulated and real world career-oriented learning experiences. . . .

With the above statement serving as a common purpose and with a felt need to establish a time-space relationship for their contracted obligations with the Illinois Division of Vocational and Technical Education, the staff members of two curriculum projects, the Health Occupations Cluster Curriculum Project and Health-Care Aide Curriculum Project, of the Department of Occupational Education, Southern Illinois University at Carbondale, set about to define a model which would add meaning and continuity to their individual and collective efforts. Both projects were similar in purpose, in that each was funded to prepare learning materials for secondary school, health careers programs.

Conducting the Key Factor Analysis

A key factor analysis technique was incorporated into the developmental phases of the project. A common purpose was established for both projects, social needs were identified and grouped, and a list of key factors and key indicators was developed. Following the preliminary steps, the organizational goals of both projects were stated and the names of the program modules proposed to meet these goals were advanced.

Five career cluster axes, five developmental career component modules and two auxiliary career component modules were proposed. Three occupational employment options accompanied the fifth developmental module. The list of proposed career component modules is presented below.

A. Career Cluster Axes

1. Applied Biological and Agricultural Careers Cluster Axis
2. Business, Marketing and Management Careers Cluster Axis
3. Health Careers Cluster Axis
4. Industrial-Oriented Careers Cluster Axis
5. Personal and Public Service Careers Cluster Axis

B. Developmental Career Component Modules

1. Elementary School-Based Career Component Module
2. Secondary School-Based Career Component Module
3. Secondary School and Community-Based Career Component Module
4. Community-Based Career Component Module
5. Occupational Entry-Level Employment Module
   a. Extended Self-Actualization Option
   b. Long-Range Occupational Employment Option
   c. Immediate Occupational Employment Option

C. Auxiliary Career Component Modules

1. Career Guidance Component Modules
2. Related Academic Subject Matter Nodes

Ordering the Components of the Career Model

The responsibility for ordering the individual component modules was assumed by the members of the Health Occupations Cluster Curriculum Project staff. Studies by Super, Tiedemann, Ginzburg, Jordaan, Holland, Hansen, Crites and Havighurst, together with selected writings and presentations by authors from the fields of education, guidance, medicine, psychology, government, and philosophy, provided the documentation necessary to defend the proposed model. Upon completion of the ordering process the model was dubbed thusly: "A Comprehensive Careers Cluster Curriculum

Model."

Defining the Components of the Career Model

Establishing a definition of the developmental component modules mandated (1) writing the parameters for each component module and (2) writing the developmental tasks for each component module.

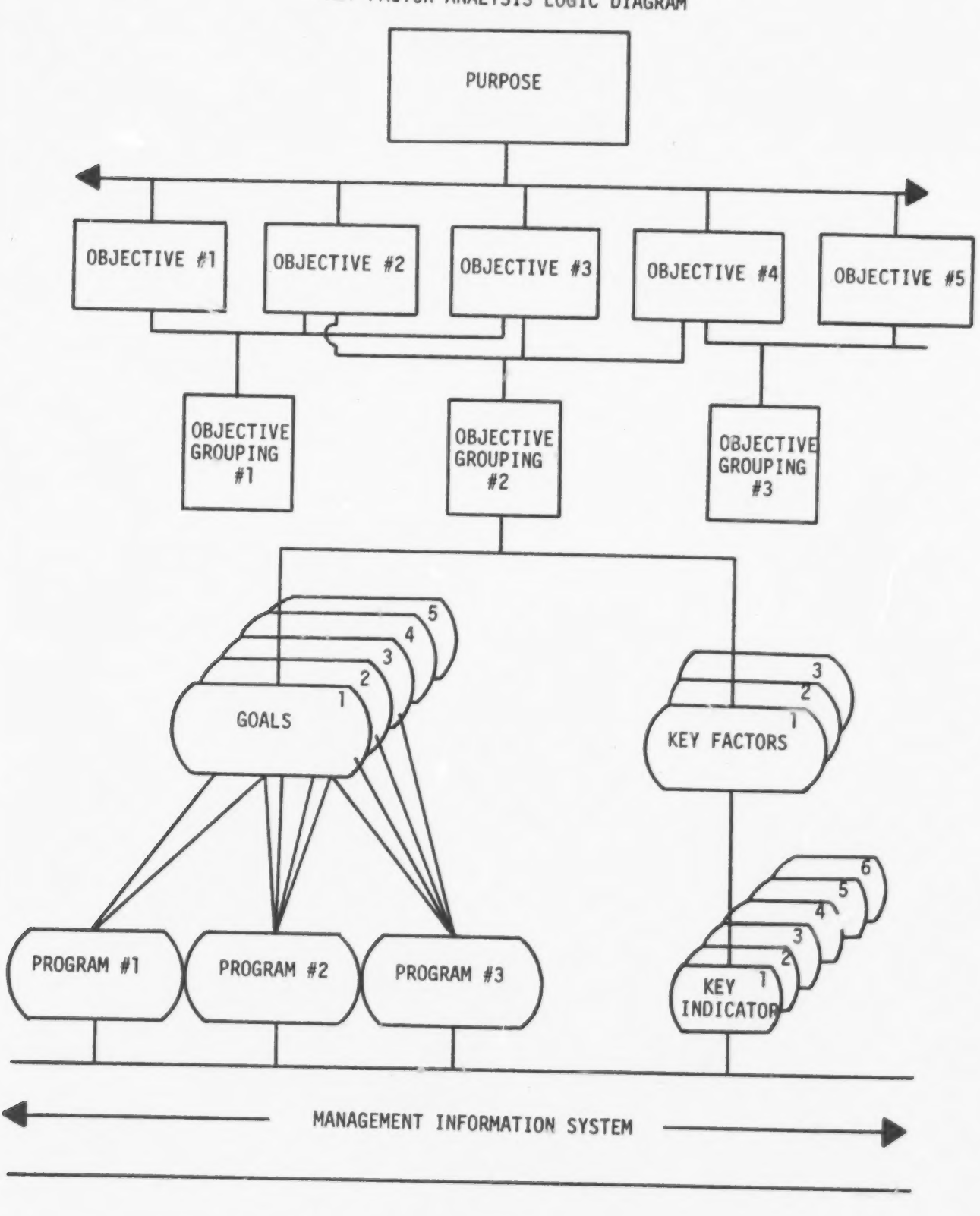
With the parameters written, and the developmental tasks listed for the respective modules, the proposed "Comprehensive Careers Cluster Curriculum Model" was considered complete.

Future effort will be directed at developing course content for the respective modules of the total curriculum model.

APPENDIX

APPENDIX "A"

KEY FACTOR ANALYSIS LOGIC DIAGRAM



APPENDIX "B"

Random List of Social Needs

People with a sense of social security

People not infringing on the rights of others

People capable of reasonable evaluation of self and others

People able to engage in cooperative endeavors

People living in understanding of one's self and others

People developing mature social relationships

People relating effectively, comfortably to work

People adequately receiving recognition

People experiencing human resources development

People living in a state of personal effectiveness (appreciated, understanding)

People with a sense of adequate personal growth

Handicapped people functioning at optimal level

People with a sense of adequate well-being

People with occupational skills

People achieving satisfaction from leisure time

People coping with transition from one developmental phase to another

People self-sufficient

Children who have learned age appropriate, basic skills

People who have reached a state of personal and societal spirituality (nirvana)

People able to achieve their own potential

People functioning to their maximum capacity

People with communicating skills

People learning

APPENDIX "B"

Random List of Social Needs (Continued)

People with adequate information about themselves, others and the world

People having acquired adequate adaptive skills

People employed at their own levels of aspiration

People with a sense of future

People able to cope with change, novelty, and transcience

People experiencing a need to know about others

People with occupational choices

People aware of life's alternatives and able to choose (decide) effectively

People not engaging in self-defeating behavior

People engaging in purposeful activity

People operating at or close to their intellectual capacity

People having an environment conducive to good health

People defining and pursuing standards, ideals, values and goals

People who will look to the future before acting in the present

People working in situations that match their abilities

People sensitive to order in individual experience and the environment

People accepting the concept that every individual is a worthy person

People with evaluatory self-help skills

People adequately fulfilling self-defined social roles

People self-confident or "OK" (in transactional analysis terms)

People with a satisfactory vocation

People with an adequate sense of self-esteem

APPENDIX "B"

Random List of Social Needs (Continued)

People adequately perceiving individual reality

People functioning at optimal intelligence levels

People with a sense of adequate self-development

People with a sense of achievement

People accepting and experiencing responsibilities

People living a desirable life-style which they enjoy

People self-determining

People delaying immediate gratification in sustained pursuit of goals

People learning for their experience whether positive or negative

People with a sense of order (rationality) in life

People with respect for the integrity of others

People working in a situation that matches their desires

People educated adequately according to individual needs and capabilities

People adequately receiving appreciation

Population willing to take action in behalf of their fellow man

People in dynamic interactional equilibrium

People experiencing a sense of belonging

People effectively (adequately) relating to another person

People responsible for the self and others

People with adequate mobility

People with a sense of belonging to society

People with adequate social adaptive skills

APPENDIX "B"

Random List of Social Needs (Continued)

People who will understand and perform within the principles and concepts of human and energy interdependence

People feeling and believing that they are making their maximum contribution to community life

People relating to peer groups

People with appropriate (tolerable) social behavior

People functioning in group situations

People interdependent and cooperative

People utilizing socio-educational relationships comfortably and effectively

People experiencing (engaging in) positive social change

People permitting others to be themselves

People with a sense of their role in the universe

APPENDIX "C"

List of Grouped and Ordered

Social Needs

People Interaction Needs

Vertex "A"

*. . .receiving satisfaction

*. . .receiving recognition

*. . .exchanging social adaptive skills

*. . .developing a sense of belonging to an ordered society

**. . .developing mature social relationships

**. . .understanding and valuing the integrity of others

**. . .relating effectively to work

**. . .enhancing one's career versatility

***. . .understanding human relationships

***. . .feeling one is making his maximum positive contribution

***. . .relating to peer groups and other individuals

***. . .functioning independently and cooperatively

***. . .engaging in cooperative endeavors

***. . .showing responsibility for self and for others

***. . .receiving and giving appreciation

***. . .interacting in dynamic equilibrium

***. . .relating to another person

***. . .experiencing a sense of belonging

APPENDIX "C"

List of Grouped and Ordered

Social Needs (Continued)

***. . .acquiring a sense of social security

**. . .willing to act for fellow man

**. . .permitting others to be themselves

**. . .respecting the rights of others

**. . .exhibiting appropriate social behavior

*. . .engaging in positive social change

*. . .experiencing positive social change

*. . .exercising reasonable evaluation of self and others

*. . .utilizing socio-educational relationships comfortably and effectively

Vertex "B"

Decision Making Needs

Vertex "B"

*. . .appreciating the career-oriented abilities and experiences of others

*. . .accepting the career-oriented abilities and experiences of others

*. . .accepting the concept that every individual is a worthy person

*. . .fulfilling self-defined, career oriented social roles

*. . .engaging in purposeful career oriented activity

*. . .coping with career oriented change

APPENDIX "C"

List of Grouped and Ordered

Social Needs (Continued)

***. . .fulfilling one's own career oriented aspirations and hopes

***. . .promoting one's own career-related interests

***. . .relying upon one's own career-related abilities

***. . .coping with career-oriented stress

***. . .maintaining one's own personal standards, ideals, values and goals

***. . .pursuing one's own personal standards, ideals, values, and goals

***. . .defining personal standards, ideals, values, and goals

***. . .increasing one's capacity for occupational selection

***. . .working in situations matching one's own capabilities

***. . .engaging in self-moving activities

***. . .making decisions with regard to existing alternatives

***. . .gaining confidence in self and in one's abilities

***. . .being self-determined

**. . .delaying immediate gratification in sustained pursuit of career goals

*. . .accepting new responsibilities

*. . .accepting responsibilities

*. . .working in a situation matching one's desires

*. . .having a sense of future

*. . .living a desirable life-style

*. . .looking to the future before acting in the present

*. . .looking to the past before acting in the present

Vertex "C"

APPENDIX "C"

List of Grouped and Ordered

Social Needs (Continued)

Growth and Development Needs

Vertex "C"

*. . .learning evaluatory self-help skills

*. . .developing a satisfactory career orientation

*. . .acquiring a sense of order in career-oriented experiences

**. . .gaining adequate career-oriented education according to individual needs and capacities

***. . .developing a sense of adequate career-oriented self-development

***. . .developing a sense of adequate personal career-oriented growth

***. . .developing communicating skills

***. . .developing self-sufficiency

***. . .coping with transition from one developmental phase to another

***. . .achieving one's potential

***. . .functioning at optimal levels

***. . .reaching a state of personal and societal spirituality

***. . .achieving satisfaction from leisure time

***. . .adequately perceiving individual reality

***. . .adequately perceiving individual learning

***. . .learning age-appropriate, basic skills

***. . .learning evaluatory self-help skills

***. . .developing a satisfactory career orientation

***. . .reaching and maintaing one's own level of aspiration

***. . .developing occupational skills

APPENDIX "C"

List of Grouped and Ordered

Social Needs (Continued)

***. . .having an environment conducive to good health

*. . .developing a sense of future

*. . .acquiring adequate adaptive skills

*. . .developing adequate career-oriented information about self, others and the world

*. . .developing a sense of adequate career-oriented self-esteem

*. . .developing a sense of adequate career-oriented well-being

*. . .developing a sense of career-oriented achievement

Vertex "A"

BIBLIOGRAPHY

Adam, James P., ed. Plato's Republic. 2nd ed. Cambridge, England: Cambridge University Press, 1963.

Altman, James W. "What Kinds of Occupational Information Do Students Need?". Paper presented at the Occupational Information and Vocational Guidance Conference, Pittsburg, Pennsylvania, March, 1966.

Ashcraft, Kenneth B., and others. A Report of the Invitational Conference on Implementing Career Development Theory and Research Through the Curriculum. Washington, D.C.: National Vocational Guidance Association, 1966.

Bailey, John A. Career Development Concepts -- Significance and Utility. Reno, Nevada: College of Education, University of Nevada, 1967.

Bailey, Larry J. A Curriculum Model for Facilitating Career Development. Carbondale, Illinois: Southern Illinois University, Career Development for Children Project, 1971.

Bailey, Larry J., and Stadt, Ronald W. Unpublished draft manuscript of untitled forthcoming book on career education.

Banathy, Bela H. Instructional Systems. Belmont, California: Fearon Publishers, 1968.

Bi-State Regional Medical Program. Opportunities in Health Careers. St. Louis, Missouri; Regional Medical Programs Service, 1972.

Blau, Peter M.; Gustad, John W.; Jessor, Richard; Parnes, Herbert S.; and Wilcock, Richard C. "Occupational Choice: A Conceptual Framework." Industrial and Labor Relations Review, July, 1956.

Bloom, Benjamin E. Taxonomy of Educational Objectives Handbook I: Cognitive Domain. New York: David McKay Company, Inc., 1956.

Bordin, E.S., Nachmann, Barbara, and Sega, S.J. "An Articulated Framework for Vocational Development." Journal of Counseling Psychology, I (Summer, 1963), 107-16.

Borow, Henry, ed. Man In a World at Work. Boston, Massachusetts: Houghton Mifflin Company, 1964.

Bortz, Richard F. "A Study of the Effect of Physical Maturity and Intelligence on the Manipulative Performance of Junior High School Students." Unpublished Ph.D Dissertation, The University of Minnesota, 1967.

Bottoms, Gene, and Cleere, W. Ray. A One-Week Institute to Develop Objectives and Models for a Continuous Exploratory Program Related to the World of Work from Jr. High Through Sr. High School. Final Report. Carrollton, Georgia: West Georgia National Conference, 1969.

Bottoms, Gene, and Matheny, Kenneth B. A Guide for the Development, Implementation, and Administration of Exemplary Programs and Projects in Vocational Education. Atlanta, Georgia: Georgia State Department of Education, 1969.

Bretz, Rudy. A Taxonomy of Communication Media. Englewood Cliffs, New Jersey: Educational Technology Publications, 1971.

Brewer, James M. History of Vocational Guidance. New York: Harper and Brothers, 1942.

Budke, Wesley E. Review and Synthesis of Information on Occupational Exploration. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, 1971.

Burns, Richard W., and Brooks, Gary D., editors. Curriculum Design in a Changing Society. Englewood Cliffs, New Jersey: Educational Technology Publications, 1970.

Buros, Oscar K., ed. Tests in Print. Highland Park, New Jersey: The Gryphon Press, 1961.

Buros, Oscar K., ed. The Sixth Mental Measurements Yearbook. Highland Park, New Jersey: The Gryphon Press, 1965.

Caplow, T. The Sociology of Work. Minneapolis, Minnesota : The University of Minnesota Press, 1954.

Coburn, Darrel W. Teachers Guide for a Project Devise. Harrisburg, Pa.: Commonwealth of Pennsylvania, Department of Education, 1968.

Crites, John C. Vocational Psychology. New York: McGraw-Hill, 1969.

Dale, Edgar. Audio-Visual Methods in Teaching. New York: Holt, Rinehart and Winston, 1961.

Denova, Charles C. Establishing a Training Function; A Guide for Management. Englewood Cliffs, New Jersey: Educational Technology Publications, 1971.

Drumheller, Sidney V. Handbook for Curriculum Designing for Individualized Instruction: A Systems Approach. Englewood Cliffs, New Jersey: Educational Technology Publications, 1971.

Frederick, Molly, ed. 1 Vision: Health and Medical Technology Education Programs. Washington, D.C.: American Association of Junior Colleges, 1970.

Fuller, R. Buckminister. Education Automation. Carbondale, Illinois: Southern Illinois University Press, 1962.

Gardner, John W. Excellence. New York: Harper and Row, Publishers, 1962.

Ginzberg, E.; Ginsburg, S.W.; Axelrad, S.; and Herma, J.L. Occupational Choice: An Approach to a General Theory. New York: Columbia University Press, 1951.

Gribbons, Warren D., and Lohnes, Paul R. Career Development. Weston, Massachusetts: Regis College Press, 1966.

Hansen, Lorrain S. Career Guidance Practices in School and Community. Washington, D.C.: National Vocational Guidance Association 1970.

Havighurst, Robert J. Human Development and Education. New York: David McKay Company, Inc., 1953.

Hein, Fred V.; Farnsworth, Dana L.; and Richardson, Charles E. Living: Health, Behavior, and Environment. 5th ed. Glenview, Illinois: Scott, Foresman and Company, 1970.

Holland, John L. The Psychology of Vocational Choice. Waltham, Massachusetts: Blaisdell Publishing Company, 1966.

Hollingshead, A.B. Elmtown's Youth. New York: John Wiley and Sons, 1956.

Hollis, Joseph W., and Hollis, Lucille U. Organizing for Effective Guidance. Chicago: Science Research Associates, Inc., 1965.

Hoppock, Robert. Occupational Information. New York: McGraw-Hill Book Company, Inc., 1967.

Illinois Division of Vocational and Technical Education. An Articulated Guide for Cooperative Career Education. Springfield, Illinois: Illinois Board of Vocational Education and Rehabilitation, Bulletin No. 37-571.

Illinois Division of Vocational and Technical Education. Descriptions Definitions and Occupational Education Coding. Springfield, Illinois: Illinois Board of Vocational Education and Rehabilitation, Bulletin No. 5-370.

Illinois Division of Vocational and Technical Education. Descriptions Definitions and Occupational Education Coding. Springfield, Illinois: Illinois Board of Vocational Education and Rehabilitation, Bulletin No. 5-1071.

Illinois Division of Vocational and Technical Education. Suggested Resource and Instructional Materials for Occupational Orientation Classes. Springfield, Illinois: Illinois Board of Vocational Education and Rehabilitation.

Jarett; Rader; and Longhurst. Key Factor Analysis Workbook. Raleigh, North Carolina: Jarett, Rader, and Longhurst, 1970.

Johns, Edward B.; Sutton, Wilfred C.; and Webster, Lloyd E. Health for Effective Living. 5th ed. New York: McGraw-Hill Book Company, Inc., 1970.

Jordaan, J.P. "Exploratory Behavior: The Formation of Self and Occupational Concepts," Career Development: Self-Concept Theory. Donald E. Super, ed. New York: CEEB Research Monograph, No. 4, 1963.

Kapfer, Miriam B., ed. Behavioral Objectives in Curriculum Development. Englewood Cliffs, New Jersey: Educational Technology Publications, 1971.

Kibrick, Anne K. and Tiedman, D.V. "Conception of Self and Perception of Role in School of Nursing," Journal of Counseling Psychology, VIII (Spring, 1961), 62-9.

Kinsinger, Robert E., ed. Career Opportunities: Health Technicians. Chicago: J.G. Ferguson Company, 1970.

Klausmeier, Herbert J. and Harris, Chester W., eds. Analyses of Concept Learning. New York: Academic Press, Inc., 1966.

Kratwohl, David R.; Bloom, Benjamin; and Masia, Bertram B. Taxonomy of Educational Objectives, Handbook II: Affective Domain. New York: David McKay Co., Inc., 1964.

Kroll, M., and others. Career Development: Growth and Crises. New York: John Wiley and Sons, 1970.

Mager, Robert F. Preparing Instructional Objectives. Belmont, California: Fearon Publishing Company, 1962.

Mager, Robert F., and Beach, Kenneth. Developing Vocational Instruction. Belmont, California: Fearon Publishing Company, 1967.

Mager, Robert F., and Pipe, Peter. Analyzing Performance Problems or You Really Oughta Wanna. Belmont, California: Fearon Publishing Company, 1970.

Marland, Sidney P. Jr. "Address to Office of Education Staff." Address delivered to Office of Education Staff, Washington, D.C., December 17, 1970.

Marland, Sidney P. Jr. "Career Education Now." Address delivered at the 1971 Convention of the National Association of Secondary School Principals, Houston, Texas, January 23, 1971.

Marland, Sidney P. Jr. "Criticism, Communication, and Change." Address Delivered to American College Public Relations Association, Washington, D.C. July 20, 1971.

Marland, Sidney P. Jr. "Data Gathering -- A Time for Planning." Address Delivered to Commissioner's Conference of the Council of Chief State School Officers, Washington, D.C., June 17, 1971.

Marland, Sidney P. Jr. "On Meriting a Good Opinion." Address Delivered to the 18th National Seminar of the National School Public Relations Association, Columbus, Ohio, July 9, 1971.

Marland, Sidney P. Jr. "Statement Before the Subcommittee on Education, U. S. Senate." Statement Delivered to the U.S. Senate, Washington, D.C., April 28, 1971.

Marrou, H.I. A History of Education in Antiquity. Translated by George Lamb. New York: The New American Library of World Literature, Inc., 1956.

Miller, D.C., and Form, W.H. Industrial Sociology. New York: Harper & Row, 1951.

Morris, Van C. Philosophy and The American School. Boston: Houghton Mifflin Company, 1961.

Nangle, Grace L. Health Occupaticns Education Centers. Report of A Seminar July 11-14, 1966. Columbus, Ohio: The Ohio State University Center for Vocational Education, 1967.

National Society for the Study of Education. Vocational Education. Chicago: The University of Chicago Press, 1965.

New Jersey Division of Vocational Education. Teacher's Guide for a Model Program on the Introduction to Vocations. Trenton, New Jersey: New Jersey State Department of Education, 1965.

Norris, Willa. Occupational Information in the Elementary School. Chicago. Science Research Associates, 1963.

O'Hara, R.P. and Tiedeman, D.V. "Vocational Self-Concept in Adolescence." Journal of Counseling Psychology, VI (Winter, 1959), 292-301.

Oklahoma Department of Vocational - Technical Education. Career Exploration: A Guide for Teachers. Oklahoma City, Oklahoma: Oklahoma State Department of Education, 1970.

Oregon Division of Community Colleges and Vocational Education. Teacher's Guide To Self Understanding Through Occupational Exploration (SUTOE). Salem, Oregon: Oregon State Department of Education, 1969.

Osgood, Charles E.; Suci, George J.; and Tannenbaum, Percy H. The Measurement of Meaning. Urbana, Illinois: The University of Illinois Press, 1967.

Osipow, Samuel H. Theories of Career Development. New York: Appleton-Century-Crofts, 1968.

Parsons, Frank. Choosing a Vocation. New York: Houghton Mifflin Company, 1909.

Peters, Herman J., and Hansen, James C., editors. Vocational Guidance and Career Development. New York: The Macmillen Company, 1966.

Roe, Anne. The Psychology of Occupations. New York: John Wiley and Sons, 1956.

Roth, Robert M.; Hershenson, David B.; and Hilliard, Thomas, editors. The Psychology of Vocational Development: Readings in Theory and Research. Boston: Allyn and Bacon, Inc., 1970.

Short, Edmund C., and Marconnit, George D. Contemporary Thought on Public School Curriculum. Dubuque, Iowa: William C. Brown Company, 1971.

Sullivan, James A. "Industrial Arts as Enterprise." American Vocational Journal, March, 1971, pp. 51-52.

Super, Donald E. The Psychology of Careers. New York: Harper and Row Publishers, 1957.

Super, Donald E., and Bachrach, Paul B. Scientific Careers and Vocational Development Theory. New York: Teachers College Press, Columbia University, 1957.

Super, Donald E., and others. Career Development: Self Concept Theory. Princeton, New Jersey: College Entrance Examination Board, 1963.

Taylor, Norman. The Guide to Garden Shrubs and Trees (Including Woody Vines). Boston: Houghton Mifflin Company, 1965.

Tiedeman, David V., and O'Hara, Robert P. Career Development: Choice and Adjustment. Princeton, New Jersey: College Entrance Examination Board, 1963.

Tyler, Leona E. The Psychology of Human Differences. 3rd ed. New York: Appleton-Century-Crofts, 1965.

Winefordner, David W. "Orienting Students to the World of Work Using the Data-People-Things Conceptual Framework and The Ohio Vocational Interest Survey." Paper presented at the American Personnel and Guidance Association Convention, Las Vegas, Nevada, April 1, 1969.

Zaccaria, J. Theories of Occupational Choice and Vocational Development. Boston: Houghton Mifflin Company, 1970.

Zytowski, Donald G. Vocational Behavior: Readings in Theory and Research. New York: Holt, Rinehart, and Winston, 1968.